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EFFECTS OF WET AND COLD: TRENCH FEET

BY MAJOR F. MCKELVEY BELL, D.A.D.M.S.

*Bramshott Military Camp, formerly Surgeon to No. 2 Canadian
Stationary Hospital, France; Surgeon to St. Luke's General
Hospital, Ottawa, Canada.*

THE present war has brought about so many remarkable changes in the world—on the sea and under it; on the land and over it—that it is not surprising that the medical world, too, should participate in the general mutation.

A little over a year ago such expressions as "trench foot" and "trench fever" were unknown, and yet new diseases such as these have been thrust so persistently before us that we have been obliged to improvise a suitable nomenclature.

The condition which we propose to discuss to-day has, more or less appropriately, been designated "trench foot". Other and more scientific names will undoubtedly be substituted for this, but I believe the original term will persist.

DEFINITION

It is difficult to define an affection which presents such varied aspects, but for our purpose to-day we may say that it is a pathologic condition of the foot caused by a combination of wet and cold. It is peculiar to the trenches and their environs in France and Flanders during the winter months and manifests itself by such symptoms as localized cedema, ecchymosis and, in a small proportion of cases, by areas of superficial gangrene. It is character-

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ized by neuritic pains of a burning nature and by hypæsthesia or anæsthesia of the skin of the affected part.

We may arbitrarily divide it into three stages of types:

First. Mild cases in which there is little or no œdema, but neuritic pain.

Second. Moderately severe cases where we find œdema, cutaneous rubefaction, and often ecchymotic areas of bluish or plum colour, usually confined to the toes. The great toe and hallux seem especially prone to discolouration; no doubt on account of the greater pressure at the metatarso-phalangeal joint of the great toe.

Third. A severe type in which we find œdema, blebs, or areas of superficial gangrene, usually of the dry variety.

Extensive deep gangrene is very rare.

When it exists we may feel reasonably certain that it is due either to actual frost bite or to some accompanying pathologic condition. The great toe, all the toes, or even the whole foot, may under these circumstances be involved.

ETIOLOGY

The exciting cause is continuous immersion for hours or days in cold semi-liquid mud or water.

The predisposing causes are (1) general; (2) local.

The general causes are: (a) lack of rest; continuous standing or half-sitting posture without removal of the boots or socks. Anyone who has not removed his boots for forty-eight hours knows how very sensitive and irritable the cutaneous nerves of the foot become. (b) Lack of exercise. There is little opportunity for men in the trenches to get proper exercise for the limbs. It is true that men, while fishing, often stand in streams of cold running water for many hours without developing an analagous condition, but we must remember that they are in a position to move about and so maintain a healthful circulation in the parts. (c) Defective circulation, due to poor nutrition, anæmia, arteriosclerosis, general debility, etc.

The local predisposing causes are: (a) Anything which impedes free circulation in the feet; circular garters, tight puttees, tight boots or straps about the legs. The puttee has been blamed, and rightly so I believe, for causing unnecessary constriction of the limbs on account of its tendency to shrink on immersion in water. The resulting œdema of the feet increases the pressure.

This winter, leather boots and puttees have been replaced by gum boots which reach to the hips. At present all troops actually on duty in the trenches are supplied with these. Unfortunately the supply up to December of last year had not been quite sufficient and men entering the trenches were obliged to put on the boots of those who were leaving. These boots were often wet at the time, and remained so. In addition to this, on account of the low land our troops occupy in many places, the trenches contain water so deep that it comes over the tops of the boots. Some regiments have adopted the expedient of placing men in barrels to protect them from the water.

SYMPTOMS

After a varying period from one to six days in the water, even although the socks are changed frequently, the feet may become swollen and painful, and later benumbed. When the soldier leaves the trench we find one of the following conditions:

1. The feet, one or both, are swollen. The skin is either covered with a red stippled rash similar to that seen in scarlatina, or it may be blanched.

2. There may be bluish or plum coloured patches at the tips of the toes, or the whole toes may be involved, especially the great and middle ones.

3. In a few cases the skin of the dorsum of the foot looks mottled, an effect evidently produced by petechial ecchymosis.

4. In from 2 per cent. to 5 per cent. of cases we find blebs; especially over the hallux.

5. The skin may be dry and shrivelled in appearance or it may sweat easily.

6. Sometimes areas of superficial gangrene occur with sloughing. In No. 2 Canadian Stationary Hospital, France, we had in addition to several hundred "trench feet" an occasional case of an analagous condition of the anterior surface of the lower leg above the ankle joint, which has been designated "trench shin", also one case of "trench knee"—a Highlander.

7. The sensory symptoms are marked. In the swollen red type the skin of the foot feels hot to the touch. In the dry shrivelled variety it feels cold.

8. The patient complains first of numbness and a prickling feeling, but in two or three days, as sensation returns, he finds a burning neuritic pain which not infrequently is so severe at night

as to demand opiates. The pain lasts with varying intensity from ten days to three weeks. The pain is differently described by different patients. Some say it is dull and aching; others that it is like the pain induced by a strong electric current, but the majority say it is "burning". In fact the sensation of heat is so intense that, as a rule, they prefer leaving the feet uncovered. Even the weight of the bed clothes increases the pain.

9. The skin of the foot from the tips of the toes to the ankle joint, and occasionally still higher, is often anæsthetic or markedly hypæsthetic to touch. On the other hand the foot is hyperæsthetic to pressure.

10. Quite commonly we find a temporary paralysis of the toes, evidently the result of a peripheral neuritis. This paralysis rarely extends to the ankle joint, and as a rule does not last more than from five to ten days.

11. In cases where there is no paralysis, the patient may not be able to move the joint on account of stiffness and pain. A remarkable feature of "trench foot" is that most of the areas such as the great toe and tips of other toes which present a bluish or plum coloured discolouration, and which one would naturally expect to become gangrenous, will slowly return to normal. In fact, where one often expects to lose a whole toe, all that ultimately happens is a small superficial ulceration.

PATHOLOGY

The pathology is still a matter of some uncertainty. It is evident the wet cold deranges the vaso-motor mechanism. We find a partial destruction of the arterioles and venules. This is evidenced by ecchymosis. The larger arteries, unlike the condition in frost bite, do not seem to be affected. There is a temporary lymphatic stasis. We find a peripheral neuritis. Ulceration and superficial gangrene are due to this combination of arteritis and neuritis.

TREATMENT

1. *Prevention.* Good feeding with plenty of fatty and nourishing food, served hot when possible, is essential. Warm but light woollen clothing and underclothing should be worn. Heavy clothing increases fatigue. Waterproof stockings and boots should be used. The boots should be large and leave an air space between

the foot and the leather. Woollen stockings may be worn next the skin and waterproof stockings over these.

A healthful circulation is necessary; hence movements up and down of the limbs, or walking when possible, is useful. Socks should be changed frequently.

Before entering the trenches, the feet should be well washed with cold water, dried and greased.

The shifts in the water should be as short as possible. At present two days is usually the minimum.

Where it can be done, rest in a recumbent or semi-recumbent posture is beneficial.

On leaving the trenches the men must not place the feet near the fire nor bathe them in warm water. They should wash well in cold water, rub the feet thoroughly, and have plenty of rest, lying down with the feet slightly elevated.

The "ounce of prevention" is nowhere better illustrated than in this affection.

2. *Cure.* So many remedies have been suggested and tried that it would be worse than useless to attempt to enumerate them all. A few general principles in treatment are fairly well agreed upon.

Rest in the recumbent position for from two to three weeks with the feet elevated.

Little or no dressings or coverings. The bed clothes should either be turned up so as to expose the feet or a cradle may be used to lift the weight.

Patients must not walk.

After the first tenderness disappears, gentle massage with oil of wintergreen or camphorated oil is indicated.

Local applications have been tried in great variety.

Among these we find alcohol; 0.2 per cent. solution mercuric chloride in alcohol; chloral hydrate and camphor; carbolic acid 1-40 solution and camphorated oil.

Evaporating lotions such as lead and opium may be used in the red and inflamed type.

Some paint the foot with tincture of iodine or picric acid.

Internally; opiates should not be used unless absolutely necessary, as the danger of forming a habit is great. In some cases small doses of codeine combined with salicylate of soda or aspirin are useful. As a routine treatment I prefer a combination of two grains phenacetin and seven grains sodium salicylate three times daily to help to relieve the incessant pain.

Calcium chloride or lactate in 10 grain doses has been tried with the idea of limiting the oedema. The result is doubtful. Very little better results are obtained with medicine than where we use only rest, elevation and gentle massage.

PROGNOSIS

I have purposely put this last as, from a military point of view, it is of considerable importance and is serious on account of the length of time required for treatment and rest. While the actual pain disappears usually in from ten days to three weeks, the feet remain tender on walking for considerably longer periods, and in moderately severe cases we may be sure our patient will be unfit for service for from two to three months.

In conclusion, we find a certain analogy between "trench feet" and chilblain because feet that have once been affected by this condition, on slight provocation, are liable to a relapse.

BRAMSHOTT, HANTS, January 26th, 1916.

AN interesting decision has recently been given by the Supreme Court of Wisconsin in regard to the death of an employee caused by typhoid fever, which was contracted by drinking impure water furnished by the employer.

The Court decided that the death was the result of an accident caused by the bad water, and that the employer was liable under the Wisconsin law.

This decision furnishes a precedent on the question whether diseases caused by conditions arising in the course of employment are the result of "accidents" as that term is used in Workmen's Compensation Laws.

Toronto Health Bulletin.

NUMBER ONE CANADIAN GENERAL HOSPITAL AS A PART OF THE CANADIAN MEDICAL ORGANIZATION IN FRANCE

By A. MACKENZIE FORBES

Lieutenant-Colonel, Canadian Army Medical Corps

THE organization of the medical services of Canada employed overseas, with a more particular description of the work of No. 1 Canadian General Hospital, which left Quebec with the First Canadian Contingent and has, as far as possible, remained with them ever since, may be of interest to the Canadian medical profession.

Speaking in a general way and beginning at the Front, and in the most advanced trenches, we have first the regimental medical officers. To each battalion one of these is attached. These men are usually chosen from amongst the younger and most enthusiastic members of our profession on active service. To them is deservedly given the greatest credit of all, because from them is expected the greatest self-sacrifice. They must be characterized by strength, both physical and moral, courage, resource and faith in their high ideal of service. They have lived up to our expectations. All glory be to them! Their work is with the battalion to which they are attached. They must either be actually with these battalions in all trials or dangers to which they have been subjected or in the closest touch with them. To them comes the opportunity of rendering the highest form of service: the cup of cold water, the relief of pain,—succour of every description, to be given often only at the greatest personal risk. These have been given. That our men have never failed to do what mortal man can do is not proven alone by the honours that have already come to them. They have amongst their number the recipient of a Victoria Cross and others with honourable decorations, but their faithfulness is proven most of all by the great and glorious deeds of daring which have been unrecorded, done quietly and without ostentation, often seen by few, sometimes noticed only by those whom they have

willingly risked their lives to aid. What other service can tell of greater self sacrifice? Have other services greater tales of heroism than that of Captain Hart, who, knowing his wounded to be surrounded by the Germans, willingly risked his life and lost his liberty by crawling back through the Enemy's lines that he might keep his promise to the wounded that he would return?

Behind the firing line come our Field Ambulances. Their duty is to supplement the work of the medical officers actually at "The Front", and to transport the wounded from the trenches to the next line of relief farther in the rear. Amongst these there can never be the close association, I might say fellowship, which exists between the medical officers and our combatants at "The Front", but amongst them must be men of strong executive capacity and resource and from them also may sometimes be asked as arduous services as that of any regimental medical officer, with the accompanying risks and even the supreme sacrifice.

The Field Ambulances normally transport the wounded from the trenches to the *Clearing Hospitals*. These latter, from a surgical point of view, are the more interesting units. They receive and clear to the Hospitals of the Lines of Communication. Now what is the function of a clearing hospital? It has been said, to receive and clear,—but more than this. They act as a sieve—the first net through which the wounded pass en route to "Bailleul, Boulonge and Bleighty." In the clearing hospitals the wounds are classified. All those demanding immediate attention are relieved. Here is the one place in the hospital chain in which most abdominal wounds can be treated with any hope of success. These hospitals are in the land of shell-fire, but though near enough to the trenches to be within easy reach of our ambulances they are far enough away to be easily evacuated in the case of a sudden advance by the enemy. These hospitals must be in constant touch with the railway system because through it they constantly, by means of ambulance trains, evacuate their wounded to the hospitals of "the lines of communication".

The Hospitals of the Lines of Communication in this campaign are called *stationary hospitals* and *general hospitals*. The first have over five hundred beds. The second have over one thousand beds. Both are always situated near the railways and within easy reach of the French seaports. Their business is to receive all patients coming from the Clearing Hospitals and to divide them into three classes—first, those who are too ill to be moved; second, those who can be expected to be well within three weeks; and third,

the greatest number, those who are well enough to be sent immediately to the base hospitals in England by Hospital Ship.

The general scheme of organization of the Canadian Army Medical Corps thus pictured, works out fairly well. All from the highest to the lowest have done their great, or their little, part in the full knowledge that they were building up a Canadian nation and faithfully serving the Crown of Greater Britain. All have realized that they were labouring in the great cause of the Allies.

NUMBER ONE CANADIAN GENERAL HOSPITAL

This hospital with its accommodation for over one thousand patients was situated on the railway between the front and the sea. Its history before its arrival in France may be summarized briefly. It was mobilized in Quebec, in September 1914, and crossed in the Great Armada of that month. Its fate was to be the chosen hospital to tend our First Canadian Contingent on Salisbury Plain. Of this all its officers are now proud.

No. 1 General Hospital was supposed at the time of its organization to be a unit whose officers and men were chosen from, and represented, Eastern Canada. Roughly speaking its personnel consisted of thirty officers, seventy nursing sisters and two hundred non-commissioned officers and men. Amongst its officers were Lt.-Col. Finley, a professor of medicine in McGill University; Lt.-Col. Kenneth Cameron, a teacher in surgery and a surgeon to the Montreal General Hospital; Lt.-Col. R. P. Campbell, genito-urinary surgeon, Montreal, now officer commanding No. 6 Field Ambulance; Lt.-Col. C. F. Wylde, a physician to the Montreal General Hospital; Major A. Mackenzie Forbes, a surgeon to both the Montreal General Hospital and the Children's Memorial Hospital, Montreal; Major Allan Rankin, originally of Montreal, but more recently a member of the Board of Health of the Kingdom of Siam; Captain George Shanks, a physician to the Montreal General Hospital; Captain James C. Fyshe, for years superintendent of the Montreal General Hospital; Captain Robert Wilson, radiographer to the Western Hospital, Montreal; Captain Lomer, at one time a pathologist to the Montreal General Hospital, but presently health officer to the city of Ottawa; Captain Johnson, a graduate of McGill University, and Captain Robson, a graduate of the same medical school; Captain MacNutt, the registrar, was born in Prince Edward Island and graduated at McGill; Captain MacAllister, also, is an easterner who was educated at

McGill. These with others formed a staff which well represented the East and especially McGill University.

Its work was begun in tents at West Downs North on Salisbury Plain. This tent hospital it continued to operate until towards the end of December 1914. It soon was found necessary to increase its usefulness by acquiring Bulford Manor, and opening a hospital there. Thus for many weeks the main hospital was situated in the Manor, but the greater number of patients were being treated under canvas on the Downs under the charge of Lt.-Col. R. P. Campbell, who did splendid work under great difficulties—his tents often being blown down and the ground always being morass-like.

Soon Bulford Manor with its surrounding tents were found to be inadequate for the many ill on Salisbury Plain, thus three additional cottages were secured and the work of treating in isolation all cases of meningitis was added to the general medical and surgical work being performed in Bulford Manor. Again the number of the sick taxed the accommodation possible at Bulford, thus the Cavalry School at Netheravon was secured.

In January, 1915, the officers and the personnel of No. 1 General Hospital were operating a general hospital at Netheravon, a cottage hospital for the treatment of meningitis at Bulford, a five hundred bed venereal hospital at Bulford (this was accommodated in tents) and an overflow hospital in Bulford Manor, besides two convalescent homes, one at Ablington House and the other at Figheldean. The number of patients treated in these hospitals was very great as conditions on Salisbury Plain were bad. The work of the hospital was carried on under great difficulties but probably as well as possible under existing conditions.

During the winter months of 1914-1915 its personnel, often encamped on the Plains, suffered many discomforts, but all have been forgotten in the glory of having served our heroic First Canadian Contingent.

When the First Canadian Contingent left Salisbury Plain and proceeded to France the personnel of No. 1 General Hospital remained on the Plains in order to tend the ill and afflicted at that time being treated in its wards. As the number of these became smaller many of the medical officers were withdrawn and sent where most needed, especially in France. Thus when this hospital embarked for France the number of its officers had been changed very considerably, and was increased in preparation for greater works anticipated there. The new members of the staff

being drawn principally from the West, the complexion of this hospital, which had so completely represented Eastern Canada, became very considerably changed although most of its original senior officers remained in the billets at first filled by them. Included in this list of original officers and accompanying the Hospital to France were its officer commanding Colonel Murray MacLaren, also Lt.-Cols. K. Cameron and Finley, also Major Mackenzie Forbes.

In France its work has been arduous, but at the same time satisfactory to the authorities as is shown by the fact that the Commandant, Colonel Murray MacLaren, of St. John, N.B., the President of the Canadian Medical Society, has not only been decorated, but mentioned in despatches and its chief surgeon, Lt.-Col. Kenneth Cameron has also been mentioned in despatches. Up till December 1st, ten thousand patients had passed through its wards in France alone.

Of its organization in France it may be said that roughly its one thousand beds were divided into four services. A medical service in charge of Lt.-Col. Finley, professor of medicine in McGill University, and three surgical services under respectively, Lt.-Col. Kenneth Cameron, of Montreal, Lt.-Col. R. M. Simpson, of Winnipeg, and Major A. Mackenzie Forbes, of Montreal. With these were associated many well-known officers of the Canadian Army Medical Corps. All these worked faithfully and well for the relief of the suffering and the glory of their native country, whose shores have seemed so far distant during their many months of service.

A SCHOOL of massage for blind soldiers was founded in the convalescent home at Reuilly, France, in May, 1915, and has now been definitely organized under the patronage of M. J. Brissac, director of public charities and hygiene. In Japan, the profession of masseur is reserved for the blind because of their unequalled delicacy and sensitiveness of touch, and in the Reuilly school French soldiers who have become blind during the war will be trained to be accomplished masseurs.

INCIDENTS IN THE LIFE OF A PHYSICIAN

BY SIR JAMES GRANT

Ottawa

IN 1852, when a medical student at McGill College, I fortunately made the acquaintance of Mr. Hughes, retired chief factor of the Hudson's Bay Company, a remarkable personality of short stature, marked activity of intellect and body, and in Indian lore quite an authority, from long practical experience with Indian tribes in the far West. One day he remarked, "I do not wish to shake your confidence in medicine, while I relate some of my experiences in discharging my duties as a chief factor over the Indians. When packing my trunk, in Montreal, after appointment, there was a vacant space, and how to fill it was the problem. So I fitted in three volumes of Burn's 'Justice', that I might prove something of a law-giver in that vast new country. On my arrival in the Saskatchewan district, I made the acquaintance of many Indians, who were most friendly and attractive. For some unknown reason they, one and all, decided I was what was termed 'a medicine man', and nothing could convince them to the contrary. From that time forth, I was sought after to remove all the ills that flesh is heir to. My knowledge of disease, or medicine, was very limited. I concluded to prescribe Burn's 'Justice', tore out a sheet from a volume, rolled it into a bolus, giving strict injunctions to the invalid to place it under his pillow, sleep on it for a couple of weeks, and then report progress. During my term in the West of some years, I prescribed thus the entire three volumes and feel confident the Indians never made better recoveries, or received *more justice*, than in my term of official duty."

MY FIRST CASE IN PRACTICE

In my boyhood, at fifteen years, I began noting the results of my father's wide practice in Glengarry as a physician. He frequently rode miles in that district, and occasionally was absent

days at a time. On one occasion an old patient of his called stating his wife was very ill, and wished to know if, in my father's absence, I could do anything for her. I invited him to take a seat, and said I would give him a few powders until my father returned. I at once secured a tablespoonful of flour, which the cook browned in good form, and I made into twelve powders, to be taken night and morning in sugar and water. In about a week the farmer returned to secure an additional supply of the medicine, stating his wife never got anything that did her so much good. "What did you give her?" asked my father. "Simple browned flour." "What a remedy," said he, "and how remarkable the result." This was my first experience in the art of prescribing, and in my lifetime I never experienced more marked success. The influence of mind over matter is truly remarkable, and the most successful physicians are those who have the power of imparting confidence, which, as a factor of relief, actually knows no bounds.

In 1874 I was suddenly called to Basketong Station, Gilmour and Company, Gatineau, fifty miles distant, mid snow, frost and heavy roads. On arrival found the case was not fracture of the thigh, as informed, but paralysis, right side of body, complete, with retention of urine, very acute. The case was imperfectly reported, and I had every appliance but no catheter. What to do under the circumstances, and at such a distance from Ottawa, was the problem. Quietly resting in my chair to decide on my course of action, an idea struck me that many years past, when reading the life of Dr. Clutterbuck, of New York, as a student, I had adopted a suggestion of a practical character to cut a hole in the lining of an old warm winter coat, and insert an elastic catheter, held safely in the coat's tail. I at once examined closely my tried friend and there to my delight discovered the catheter, which at once afforded relief and saved the life of my patient *pro tem*. Any port in a storm, and it is a safe expedient under such circumstances to have a catheter near at hand.

My first case of stone in the bladder. In 1860 took charge of a ward in the General Protestant Hospital, Ottawa, where my attention was called to a patient labouring under a severe attack of whooping cough. A young lad aged sixteen, thin, pale, and distressed, owing to inability to retain his urine when coughing. On examination the urine was discovered to be quite ammoniacal, voided in considerable quantity, and this irregularity noted particularly since cough developed. I at once concluded a foreign body was the source of difficulty, sounded the bladder and defined

the presence of stone, which I removed successfully in a few days by the lateral operation. The chief source of difficulty was non-union of the incision, owing to the spasmodic action of the patient's coughing on the wound, which, after several weeks, closed completely, and patient was discharged entirely free from both cough and stone.

The late Sir Andrew Clark, London, remarked to me every case should be examined thoroughly, that there may be no link wanting in arriving at a correct diagnosis.

In 1874 I was summoned to Sir John A. Macdonald, in the Commons, where he was suddenly seized with acute pain in the region of the left kidney, which proved to be due to the passage of a renal calculus to the bladder. The pain was so intense that he was removed to a room in the left block of Parliament Buildings, a hypodermic administered and perfect rest enjoined. After some hours the difficulty was removed, and a normal state of the system was restored. The following day Sir John asked me what this kidney stone really was, when I stated, "A small gritty calculus." At once Sir John replied, "Confound those Grits, I knew they would be the death of me some day."

In 1873 I was called to Stadacona Hall, and on arrival found Sir John had a slight cold. I was invited into his studio, where he sat in a large armchair, warming his feet by the fire and reading a book in which I noted a yellow marker. This, Sir John drew out, and asked me to read. It was a cable received the night previous from Grenfell, London, England, stating that arrangements had been completed for construction of the Canadian Pacific Railway. "Well," said Sir John, "after such a cable, I thought the best thing I could do this Sunday morning was to read my Bible, and thank God for what He had done for Canada."

In July, 1860, I was summoned to an accident in Cumberland, Ontario, by a messenger on horseback. A farmer crossing his fence, carrying a large scythe on his shoulder, had accidentally punctured an artery, and blood was flowing freely. At 2 a.m., raining cats and dogs, I mounted my horse, and off we set a distance of twenty-five miles. On arrival I found the thigh fortunately tightly tied by a pocket handkerchief, and the wound in the popliteal region tightly packed with softened tobacco. This I at once removed, washed the wound, and found the popliteal artery had been seriously punctured by the scythe in crossing the fence. I at once secured the best light possible—a strip of woollen cloth saturated in sweet oil in a small cup, in fact *the old Roman lamp*. To save life, and without delay, I found it necessary to ligate

the femoral artery, and slackened the compress when bleeding from the wound was still active. The compress was at once replaced. I examined the femoral artery carefully, and was obliged to ligate it higher up owing to an abnormal subdivision of the artery. The compress was then removed, and there was no return of bleeding from the popliteal wound. The parts were carefully dressed, and the case placed under the charge of a local surgeon. In a few weeks an excellent recovery followed. In those days country roads were not inviting and household effects were not encouraging, and yet it is surprising how life is saved, "roughing it in the bush."

SKIBO AND LUMBAGO

In 1902 while attending the meeting of the British Medical Association in London, I was invited to Cromarty, Scotland, where the hundredth anniversary of Hugh Miller was celebrated, and hundreds assembled from far and near to honour the memory of the greatest geologist Scotland ever produced. At the conclusion of a brief address on the scientific institutions of Canada, a gentleman on the opposite side of the table extended his arm and invited me most warmly to Skibo Castle, which I visited the following day. On arrival, Mrs. C., at lunch, stated she regretted her husband was very ill, and could not be seen, for a fortnight, as he had a sharp attack of lumbago, which she learned was produced by *stored electricity*. I informed her that idea was from a paper I had written some years ago on this subject. I was invited to Mr. C.'s bedroom where he was prostrated, and suffering pain in the lumbar region. "Can you do anything for me," said the worthy Laird. "Assuredly I will have you about in half an hour." He was placed on a sofa, back exposed, and parts sponged with warm water and dried carefully. The lumbar muscles were firm as a board and painful on pressure, but there was *no rise in temperature*, and the attack had come on suddenly, rendering him unable to move about. I at once punctured the stiff lumbar muscles with No. 8 small needles, eight or nine on either side of the spine, an inch apart, pressed by my thumb nail half their length into the muscular tissue, with some difficulty owing to the excessive muscular rigidity of the disturbed parts. In a few moments the pain in the back suddenly departed, the punctured muscles becoming quite soft and pliable on pressure and the needles removed with no difficulty whatever. The sudden transition from an abnormal to a normal state of the back muscles was most remarkable. The patient, then seated on the sofa, stood

up and walked, stating all pain was gone and that he felt perfectly free. His exclamation was, "Is this a miracle or a faith cure?" I replied, "It was the science now practised in Canada."

In an hour he dressed, visited guests in his drawing room, much to their surprise, and from that date to the present has had no return of the lumbago.

As to the abnormal accumulation of electricity at times, in muscular tissue particularly, in the lumbar region, there is no doubt whatever, as defined in my paper, *Montreal Medical Journal* many years ago, since which time this method of puncture has proved a blessing to many sufferers from lumbago.

SERUM THERAPY IN 1861

In 1861 my general health was on the decline from an unknown cause, which I concluded resulted from some poisonous influence, contracted while on duty, General Protestant Hospital, Ottawa; never contracted syphilis or anything of that character. I made every effort to regain my usual health and strength without evident success. In 1861 was invited by the late Dr. Hamnett Hill to assist in a surgical operation in the General Protestant Hospital, and contracted blood poisoning,—the outlook most unpromising. After several weeks' serious illness made an excellent recovery, my system regaining in every particular the normal state of health and vigour. To account for such a marked constitutional change for the better aroused in my mind the idea, one poison had actually counteracted another. It then struck me to test the effect of serum of ordinary vaccine lymph, in skin disease, particular psoriasis, and with most practical results. On February 20th, 1863, after three years careful research, published a record in the *Medical Times Gazette*, London, England. From that date to the present, I have enjoyed perfect health, never absent from duty a single day. At that time, owing to the remarkable results of vaccine serum in disease, I felt we were on the eve of a great change in therapeutic serum power, and placed in my paper of 1863 a paragraph in large type that "Man has still much to learn". Since that date Virchow, Pasteur, Koch, Lister, Wright, and Flexner, have revolutionized the domain of bacteriology by remarkable scientific achievements. Since 1861 I have frequently used the serum of vaccine, as an alterative in cases of constitutional debility, with excellent results.

The late Dr. Radcliffe Crocker, University College, London, in 1896, noted favourably my paper in his able work on skin diseases.

A PANORAMIC SKETCH

BY ROBERT W. POWELL, M.D.

Ottawa

IN undertaking to present a paper this evening, I presumed it was simply to be an incident in the course of your usual entertaining series of events, and I much fear that if I am to provide the refecution for the entire session many will go away disappointed. It is impossible in writing in the vein I propose altogether to get rid of the "ego" that is bound to crop out prominently. Nevertheless, I wish it to be understood that this is in no sense an autobiography, but just a recounting of events in which I have been a participator, more or less. I am thankful to say I still retain the long life desire to work and to be active in professional channels, and I hesitate to be charged with that reminiscent faculty so appropriate to decrepitude.

I engaged in my class room and hospital work in the early seventies at a most interesting and decisive period when we were not yet even on the threshold of the truth as it applied to uncleanness, but I was fortunate in witnessing the struggles of extraordinarily able teachers and hospital workers who were even then able to distinguish gleams of light and some sunshine through the mists and fogs of ignorance. So much has been written and published in the years that have gone by in the way of addresses at scientific gatherings, most of which you are undoubtedly familiar with, that I forbear even to add a short quota.

It is the old familiar tale of wasted effort, disappointments and misgivings, trials unspeakable, when human life was considered, and a hopelessness of ever reaching the success due to unselfish and untiring devotion. To bring all this home to us now in 1915 would require the relating of specific examples and the introduction of the personal element of names and occasions that would exhaust the patience of even a well trained audience such as this. It will

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suffice to say that our minds and aspirations were tuned to the breaking point and that to me personally it has been a source of endless satisfaction and of educational value to have been born an M.D. the very year Listerian methods were first introduced into this country by Roddick. It seemed to require only this dawn of the new birth to awaken the keen intellects of the day to the enormity of the past and to lighten the horizon in all directions with an aurora that was shown not to have been extinguished, but only smothered and hidden by uncleanness then but dimly understood. To say that methods and practices began to be revolutionized will only feebly express the daily happenings, the quickly altering results, comfort succeeding misery, hope implanted that formerly was well nigh obliterated, new ventures for a time only dreamed of and spoken about with bated breath, here and there a triumph, regions of the body invaded that had up to now been held sacred, and all the time the gospel of asepsis shedding its benign rays upon all who worshipped at its shrine.

To come nearer home, I recall with ease the first beginnings of abdominal work in Ottawa and the delight which followed on the successful surgical treatment of that bugbear to all physicians of the day—inflammation of the bowels—so called.

Each of you can picture for himself the stages of progress all along the line and how modernized methods from year to year have facilitated the work of cure in all departments.

Another interesting paragraph could be constructed in relation to the subject of internal medicine, but considering that only two weeks ago we had the advantage of listening to Dr. Hamilton, of Montreal, on a branch of this subject, viz., the ductless glands and their secretions, it will be superfluous for me more than to advert to it here. It is more in the line of the pathologist and laboratory worker to talk to you about the advances in serum-therapy and our attitude generally to the varying ailments affecting human life, but the work and observation of the clinician must not be lost sight of. His triumphs are often silent tributes to patient oversight and careful recording and while they are not accompanied by the brilliancy with the public of surgical victories, which in the main can be seen or felt, yet they are none the less great triumphs born of logical reasoning and profound research. Just at this juncture a meed of praise must be given to our venerable and revered colleague, Sir James Grant, who, as far back as 1861, observed the effect of the vaccine serum in assisting materially to hasten the cure of an obstinate skin rash. That this was not overlooked or passed

carelessly over is proved by the fact that an observation was recorded at the time and the facts published in an English medical journal of the day.

Most interesting memories are with me in relation to hospitals at the time of my studentship and subsequently. For years in the summer season I had the honour of being general purpose man in the old stone building surmounted by a cupola, which was a ward, known familiarly as the Protestant Hospital. Clinical clerk, dresser, maker of pills and potions all fell to my lot from March to October. No house surgeon, no skilled nurses, no ward man, and yet the daily work went on under a staff of earnest workers, all of whom had to do their own dressings and be on the alert for secondary hæmorrhage, or other disasters and inconveniences not necessary to enumerate. The sheds at the rear of the property decorated with smallpox patients, all of whom in a severe epidemic of those days had to be attended by members of the staff, and then later on the new building and greater conveniences, an enlarged staff, but yet those of us not at that date honoured by an appointment, not having any privileges whatever with our own private cases. No man could attend a sick person under that roof unless he was a member of the staff. This good old English rule cannot be sneered at even though it was inconvenient, but the low mutterings of discontent, yes of revolution, were heard gathering in force and a democratic upheaval began to spread through the province as regards hospital administration. A page of this subject I would fain omit, but I might be misinterpreted. Methods of hospital government began to be called in question and the position of members of the active staff became jeopardized in the maelstrom, according to our conservative way of thinking. Habits of life and environment are stubborn things to debate about and so from 1891 to 1896 the storm swayed and raged with a varying intensity and at this juncture the Protestant Hospital staff of fifteen men as a body decided to withdraw, for a matter to them of vital principle.

It was said to be pique, but I know better. There were some heartburnings and some personal acrimonies, but on the whole, on looking back through the vale of tears, I am convinced that the staff finally received credit for acting honourably and with a full sense of responsibility. Humanly speaking, we were the sufferers, and what it cost us in time and comfort and energy can only be conjectured. We determined to seek another home and we chose the southern part of the city, then but sparsely populated. Time

has flung her kindly vesture over these stormy scenes, and time has demonstrated that St. Luke's has taken her own place, and if it is not admitted that she at any time filled a felt want, surely it can be allowed that she has shown a "*raison d'être*" for her existence. Personally, I was in the forefront of that hospital storm. I had to be in the lime light owing to the position I then held. I stuck to my guns anyhow, and I never for a moment regretted it. I think I rather enjoyed it. Personal recriminations could not well be altogether avoided, but after all I scarcely believe I lost a friend, nor do I think I created a real enemy.

What shall we say of trained nursing? An attempt was made in a very humble way in the early eighties to secure for Ottawa a few trained nurses, but it was not till Lady Stanley, of Preston, the wife of the Governor-General, seriously took hold of the situation that anything definite was done. Her splendid personality and her high influence had its effect at once and "The Lady Stanley Institute" was the result. How this movement spread and helped us all I need not dilate upon, but many a man to-day with all the satisfaction and comforts he possesses in doing his hospital work ought to remember with gratitude some of his predecessors who gave of their time and their energy and their means to advance the interests of the sick and suffering by the establishment of training schools for nurses. That they have proved themselves a boon to us all has only to be mentioned.

I would like to take this occasion to remind my hearers that there are avenues open for the talents and activities of medical men not associated with the active practice of medicine and surgery, and that in a survey of this kind they ought not to be overlooked. Public health in its various activities offers a splendid field for study and work and has in its gift many an attractive position of honour and emolument for its adherents.

The work they do in a quiet unostentatious way for the betterment of their fellow beings is admitted on all sides, and yet many a hygienist passes along on the stage fulfilling his daily functions almost unobserved.

I have in mind one of my oldest friends, a resident of Ottawa, the Director General of Public Health, Dr. Montizambert.

He was appointed as assistant at the Quarantine Station at Grosse Isle in the St. Lawrence in 1866, and remained doing the summer's season work there year by year and guarding the Port

of Quebec until 1894, when he was made general superintendent of quarantine services. In 1899 he was made Director-General of Public Health with headquarters at Ottawa and installed as sanitary adviser to the Dominion Government. Under his management and control the service has grown and developed from a few crude sheds to four thoroughly equipped sanitary stations with laboratory workers and complete sterilizing outfits for human beings and their clothing, and for the disinfection of all ships, each station fitted for its work and officered competently, including skilled trained nurses. This work, together with supervision of the international boundary from Manitoba westward is being thoroughly inspected annually.

Together with this activity is the charge of the Lazarettos in New Brunswick and in British Columbia, all combining to constitute the entire work as one of absorbing importance.

As he so often has said to me "the more efficient such work is the less the public knows of it."

I have singled out this case owing to the position our friend has attained and because I know of many of the facts, but I realize that there are countless other men doing splendid work in like channels in cities and towns unheard of by their fellow workers in hospitals and at the bedside.

Then, in military life and all that goes to make efficiency in the field. A vista no doubt on some occasion spread itself before our friend, Surgeon-General Carleton Jones, many a year ago, and he took up that department with faithful patience and assiduity and he finally gained the top rung of the ladder. And so it goes on, and your minds will conjure up many an avenue of usefulness in public life open to the same energy and application as is called forth in the famous surgeon or internist.

Being active in the meetings of the Canada Medical Association all my life it was natural that I voiced what I believed was the opinion of the profession on the subject of the creation of a Department of Public Health under the Dominion Government.

Most of you know as well as I do the steps that were taken and the pressure used through the Canada Medical Association, but the truth is we did not speak loud enough. We could not have been united enough. Our strength waned at the wrong time. We did not drive home our arguments with the only ammunition that will move governments, viz., votes, and so up to date we have failed. The proposition was made clear enough. We asked only

something simple and common sense, viz., that matters of public health, now under the jurisdiction of about seven departments, with great inconvenience to the public, be brought together into one department, and that a political Minister of Health was not with the range of our demands, but that the department could be administered by one of the existing members of the cabinet. In this matter we are away behind nearly all civilized countries. A national laboratory, chemical and biological, ought to be at Ottawa, and then we could be put in possession of laboratory products so essential in these days, knowing them to be of standard composition and value and not be obliged to depend on commercially issued packages put on the market to make money out of.

The health of the individual of a country is one of its highest assets and yet we spend prodigious sums to protect the public at the borders where disease may possibly gain admission, yes, and huge sums in all directions where the health of cattle, or swine are concerned, both at the border and within the country, but nothing as a State is done to protect the lives and comfort of the Canadian atom created in our midst and acknowledged to be the backbone of the national wealth.

Canadian manhood and womanhood may have a higher place in national estimation when this titanic struggle in Europe is over, and possibly it will be learned that it is a useful thing to have strong and vigorous manhood available for the upholding of all that is worth fighting for, and that it would pay to preserve the interior of the nation in good health as well as merely guarding the borders from inroads from outside.

At the threshold of the opening of the new century I became convinced of the crying necessity for the establishment of an association that could be utilized for binding the profession from the Atlantic to the Pacific into a brotherhood for protection and defence against unworthy assaults on its members in relation to trumped up charges of malpractice and I devoted a major part of my address as president of the Canada Medical Association that year at Ottawa in 1900 to the consideration of this question.

I was quickly rewarded, because the next year at Winnipeg a scheme was formulated and I was asked to take charge of its organization. I consented on the one ground that it was to be made Dominion in its operations. This was acceded to and the work was undertaken. It was a labour of love and I threw my energies into it unsparingly. I was not well supported, but, realizing that

such schemes must have small beginnings, I began personal appeals to the many friends and acquaintances I had met throughout the Dominion while attending Canada Medical Association meetings. But for the loyalty and support of these friends my scheme was doomed to failure. However, I never let go and at last began to reap a success. It was small and of slow growth, but the premises being sound, I had no misgivings, and so plodded along, meeting with nothing but success in the defence of cases, albeit our treasury was in a sad state many a time and oft, for legal battles are expensive whether one wins or loses.

We paid out money cheerfully and in five or six years the horizon cleared and since then we have had no anxiety.

The majority of my hearers will have read my short annual addresses at the various meetings so I will not reiterate them.

My main theme was the constant preparation to enable us to step into the breach and assist an unfortunate, and probably maligned, brother in defending his integrity and his purse.

It is impossible to sum up the results in figures because where one action was brought to trial we silenced three others in embryo by accepting service of the writ whenever the plaintiff decided he was ready. I am gratified, however, to be able to say we have fought out at least thirty cases in open court and in all these, save one, we have come out victorious.

To estimate what this means to practitioners in local centres far away from proper facilities for preparing a defence in a law suit is well nigh impossible, but the relief of anxiety and the sense of confidence that we have been able to implant can in some measure be computed. We have never had to borrow a cent.

The annual dues of members cheerfully paid in year by year have supplied us with the sinews of war, and we have accumulated assets to-day of some \$10,000 available to work with if need be, and we have paid out in round figures about \$6,000 in legal expenses. We have just emerged victorious last month in two rabid cases in Western Ontario where the plaintiffs abandoned their actions in open court.

The most recent activity I have been engaged in has been the establishment of the Medical Council of Canada. It would take a ream of paper even to outline this operation with all its manifold entanglements since the eighties. The champion fighter was Sir Thomas Roddick and his pluck and pertinacity surpassed belief. He did not know the word failure and this dream so dear to him

inspired his whole being and inspired all those who came in contact with him in the prosecution of his scheme.

To tell of those whom he relied upon for support would be invidious unless I were in a position to name them all, but I can assuredly say that without Roddick and his strong personality the scheme would have died even after the first Bill was placed on the Statute Book in 1902. The small share I had in it was a constant source of delight to me, but I never wavered in my allegiance to Roddick, because I believed in him and in his scheme. It is delightful to me to know that he lived to see the fruition of his labours. His baby has been born and is a flourishing child. He was made its first president, and is now its permanent honorary president. It is a further satisfaction to know that his Sovereign saw fit to recognize his sterling worth, and the high position he attained to by granting him his imperial distinction.

It was decided at a meeting of the American Red Cross Society, which took place in New York on February 16th, last, to equip three additional base hospitals for service in Europe. Dr. George E. Brewer, of the Presbyterian Hospital, New York, Dr. Charles L. Gibson, of New York, and Dr. George D. Stewart, of Bellevue, each with nineteen physicians, forty-six nurses, and one hundred helpers, are prepared to leave for any point in the world at the order of Colonel Jefferson R. Kean, who was recently appointed director-general of military relief in the Red Cross Organization.

THE PROVINCIAL HEALTH ACT: ITS MERITS AND DEFECTS

By T. H. WHITELAW, M.B.

Medical Officer of Health, Edmonton, Alberta

THE Provincial Health Act passed in 1910 has now been in force four years, and its practicability and efficiency have been tested, especially in the larger centres of population. On the whole, the Act has been found to work out satisfactorily from the public health standpoint. Certain defects and weaknesses, however, have from time to time been revealed by prosecutions instituted under its provisions where the chicanery of the law has been invoked to defeat the intention of the provincial board in making the Regulations and to the chagrin and discomfiture of health officials, failure to obtain a conviction has frequently resulted from legal technicalities and quibbles which to a layman seem frivolous, but which under the skilful manipulation of clever and subtle young lawyers acting as counsel for the defendant, are made to appear of sufficient importance to justify the verdict "dismissed with costs", even when the evidence clearly indicates the guilt of the accused. The burden of proof rests with the prosecution as is usual, and infractions of the law respecting public health are perhaps from their very nature more difficult of proof than those of common law. It does appear that magistrates generally exhibit a reluctance to convict on matters of public health unless every jot and tittle of evidence has been produced respecting identity, dates, time, place, service of writ, etc. Curiously enough, the public in whose interests such prosecutions are instituted, almost invariably regard such action, brought against the individual, as persecution rather than prosecution and exhibit an unholy levity when the delinquent succeeds in escaping a fine through some slight technicality of the law.

Some years ago I had occasion to prosecute an individual who persisted and insisted in living in a small tent as a dwelling on our

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main business street. Water and sewer mains had been in use for several years on this street, and the charge was that he had failed to put sanitary fixtures in his place of abode. I had to produce the city engineer with his blue prints to prove that the city had laid sewer and water pipes there. This having been established to the satisfaction of the court, I was then nonplussed by the magistrate asking me if I was sure there was water in the mains. Nothing daunted, I produced the occupants of neighbouring houses who testified that they obtained fluid from their taps commonly known as city water. Eventually the case was dismissed on the ground that a few boards having been built inside the tent as side walls, it was therefore no longer a tent but a dwelling with a canvas roof, not a tent as stated in the indictment. Learning, however, that there was a law regarding brick chimneys as against stove pipes, I instituted another action requiring the replacement of the stove pipe by a brick chimney. This got him and he removed his belongings in a few days and shortly afterwards his ramshackle structure from Jasper Avenue, 5th Street West. In passing, I may say he was a citizen possessed of more than the average share of worldly goods.

A prominent citizen was allowed by me as a concession to answer a charge of breaking quarantine for his wife, who, while her child was under quarantine, left her house to attend a fashionable public gathering where I had the misfortune to meet her and thus became aware of the liberty she had taken. In this case the family doctor, who was catering for fashionable practice, came to the rescue and testified that he had advised her for her health occasionally to take a walk round the block. This, the same magistrate thought, justified him in dismissing the case, magnanimously refusing the accused his costs which he asked for. A few days earlier he had assessed a much less flagrant case of breaking quarantine for scarlet fever, \$10 and costs. But this man had the honesty to plead guilty and was a comparatively obscure and unknown citizen.

Another action was brought against a prominent citizen, for failing to report a case of chicken-pox in his family. This case was contracted from a previous case in the same house for which quarantine had been imposed and removed the day before, after recovery. For this second case no physician had been called, but the mother of the child had stated to the health inspector that it was chicken-pox. In connexion with this case the following may be quoted from the inspector's report as indicating the extreme difficulty of obtaining a conviction where a medical man has not been called in.

"Before entering the dock I was told by the assistant city solicitor that I might put in anything possible, but that it was not likely that I would be given much of a chance to speak. I found this to be the case as the several questions asked by the solicitor were at once objected to by the counsel for the defendant. In summing up the case, the magistrate stated that the health department appeared to have no case, because no actual medical authority had been produced as to a case of chicken-pox having existed in defendant's house. It has also been explained to me by the city solicitor that in order to prove a person to be a householder, the landlord of such premises would have to be produced in court or some direct proof that the man himself was the owner of the premises. The direct conversation held by an inspector with the wife of any householder would not be regarded in any court of law as evidence that such disease existed."

An attempt at enforcement of the compulsory vaccination law respecting school children has recently brought to light unexpected difficulties suggesting the necessity of amending the Act. With the support of the anti-vaccination league in our city and apparently at its instigation, an attempt is now in progress to contest successfully the validity of compulsory vaccination of school children. A healthy child has been refused admittance to the school for failure to comply with the regulations. His father was summoned by the truancy officer for failing to send his child to school, but the case was dismissed on the ground that the boy was not in the real sense a truant. Under Clause 2 of Section 69, the father was then summoned after he had failed in his application to a judge of the Supreme Court for an interim injunction compelling the School Board to admit the child. Clause 2 reads as follows:

"The parent or guardian of any pupil who has been refused admittance to any school for non-compliance with Regulation 68, shall cause said pupil to be vaccinated within fifteen days after refusal, and the parent or guardian who fails to comply with this regulation shall be guilty of an offense under these Regulations."

It became evident from the line of defense taken up that to secure a conviction it was necessary to bring direct evidence to prove:

1. That the party summoned was the parent or guardian of the child. This was established by the evidence furnished

by the truant officer. The child himself should, in such cases, be summoned to identify his father.

2. That the full period of fifteen days had elapsed since the father was officially notified by the teacher of the exclusion of his child. In this connexion it developed that the carbon copy of the notice issued to the defendant was not admissible as evidence. In future, it is our intention to give the carbon copy as notice and retain the original, reading it to the person notified as to exclusion. The teacher could not swear positively as to the date of exclusion though other evidence adduced clearly indicated that at least four weeks had elapsed since exclusion from school. On this point the case was dismissed.

3. That the child had not been vaccinated since exclusion. This must apparently also be proven and it is doubtful if the court would order the child to submit to an examination to settle this point.

The fight over this case is likely to be renewed after school reopens, and at my suggestion, the provincial medical officer of health has promised to have an amendment passed adding to this clause the words "failure to produce a certificate of successful vaccination shall be taken as *prima facie* evidence that the pupil has not been vaccinated."

The provincial board has at all times exhibited a courteous willingness to make amendments to the Act where experience indicates the necessity of such. Measles was originally included under diseases subject to full quarantine, but as a result of a resolution passed in 1911 at our provincial meeting in Edmonton, the provincial board of health placed measles in the list of modified quarantine. At that time I favoured also putting chicken-pox under modified quarantine, but did not succeed in getting a resolution to that effect passed. My opinion has remained the same, confirmed by experience, that it is the height of absurdity and liable to make the whole Act the subject of ridicule to enact that a householder shall not enter or leave his house because the baby has the chicken-pox. An amendment might advantageously be introduced to the effect that once the health officer has satisfied himself that the disease is clearly one of chicken-pox and not smallpox, modified quarantine should be imposed.

An amendment recently introduced which requires that all certificates of exemption from vaccination for illness or weak health shall be countersigned by the medical officer of health or the chairman of the board of health, has caused some dissatis-

faction, in our city. This amendment received the unanimous endorsement of our medical association, but one or two of our physicians appear to object, claiming that their certificate should be accepted without question. I have found that in the majority of such cases the reasons given are adequate and justify exempting the pupil from vaccination, but in a few cases where the parents were pronounced anti-vaccinists, no definite condition of ill health was stated as called for by the Act, or some very trivial or insufficient reason was given such as tendency to eczema, hives, hereditary taint, skin eruptions, certain circumstances relating to health, etc. One of our osteopathic practitioners previous to this amendment had begun to make a specialty of such cases, receiving in some cases a fee to my knowledge. He no doubt did this with a clear conscience since he poses as the leader of the anti-vaccination league of our city. Two of his certificates were worded as follows:

"This is to certify that I have examined John Jones, and am of opinion that vaccination should be waived in his case on account of a possible impairment in the integrity of the health of his nervous system." And,

"This is to certify that I have examined Arabella Samantha Allen as to the normal condition of her nervous strength and resistance and find it is not sufficiently normal to risk the possible harmful effects of vaccination."

Comment is unnecessary and I may say it was chiefly on account of this wholesale attempt to evade the vaccination law that I induced the provincial board to introduce, in twenty-four hours, the amendment referred to which effectually put an end to this special branch of osteopathy.

In connexion with vaccination it appears to me that in view of the fact that the Act makes it compulsory for school children to be vaccinated before attending school, this operation should be offered free to the public generally whether in a position to pay for it or not. At present the Act simply calls for free vaccination by the health officer to those unable to pay for it. In Edmonton our custom has been to vaccinate free of charge all who apply, irrespective of whether they are in good circumstances or not, and as a result of this a great deal of the prejudice against vaccination has been eliminated. In any case, vaccination is a purely public health measure and is intended as a protection to the community at large against smallpox. The community at large, therefore, in my opinion, should bear the expense, not the individual.

Some of the regulations in this Act suggest that they were included as a result of their author being influenced by old time ideas of the causes of infectious diseases which are now considered antiquated by the best sanitarians. As an example, allow me to quote Article 29 under contagious and infectious diseases.

"Every person shall wear an outside suit of overalls or other suitable covering to protect the whole of his clothing when attending any patient suffering from smallpox, scarlet fever or diphtheria, and immediately after such attendance he shall disinfect all exposed parts including hands, face, hair and footwear with a solution of bichloride of mercury."

I may safely venture to say that no medical man in the province disinfects his boots or hair after visiting a case of infectious disease, and that outside of attendance in hospitals for such diseases, not one per cent. of our physicians wear a gown or overalls in visiting their private patients. It is possible, however, that the majority do take the precaution to disinfect their hands if they have handled the patient. And yet I have no evidence to hand that any medical man in Edmonton has ever carried infection from one house to another.

Some modifications of the regulations as regards disinfection of houses might with advantage be introduced. The Act calls for the use of formaldehyde fumigation after cases of measles as well as for diphtheria and scarlet fever. From January to June, 1915, we had in Edmonton fifteen hundred and six cases of measles under quarantine. Had we carried out the instruction to the letter we should have expended a very large sum for disinfectants, and in so far as experience throughout the world is concerned, as expressed by the most prominent sanitarians, we would not have reduced the number of cases by one tenth of one per cent. Our custom was, in removing quarantine for measles to order the patient a disinfectant bath and to prescribe general directions for cleaning and airing the rooms and boiling all washable bedding and infected articles or clothing. In certain cases, to satisfy the undue scruples of the householder or his medical attendant we added fumigation of the bedroom. In connexion with disinfection the following statement in the *American Journal of Public Health* for February, 1915, emanating from the New York Health Department may be of interest.

WHY FUMIGATE? The New York City Health Department has given up fumigation after cases of infectious disease, as a costly procedure, the inutility of which has been well

established. In reply to the query of a New York State physician, as to the "why" of the action, Commissioner S. S. Goldwater stated that the department was willing to "profit by the lessons of experience and prepared to go forward even at the risk of being misunderstood for a time by the laity and by those members of the medical profession who are content to practise according to formulas which were valid a generation ago but which should now be supplanted by more enlightened views."

He said that it was "disconcerting to read that health officers lack the courage to discontinue practices which they publicly confess as valueless," and asked whether it was not the duty of the department to the taxpayers to discontinue the practice.

The clauses of our Act requiring the absolute exclusion of children from school when a case of infectious disease exists in the home might well be subject to some modification in the interests of school attendance in respect to the minor infections, whooping cough and measles, and especially when the children of school age have already had the disease. It frequently happens that a large number of children who are not susceptible, are debarred for weeks from attending school because the baby has contracted whooping cough or measles.

The above suggestion may not appeal at present to the average physician but the following quotation from an article on measles in *The American Journal of Public Health* based on the experience of the New York Public Health Department indicates that by such stringent regulations, we unnecessarily curtail school attendance in the minor diseases.

"Adults and children who have previously had the disease need not be restricted but it is advisable to warn them as to the slight possibility of second attacks and keep them under observation; children who have not previously had measles and who are in contact with cases, need not be restricted for seven days after contact but should thereafter be isolated for at least ten days and carefully observed. Disinfection after measles is useless and unnecessary. Transmission of measles by third persons or fomites must be exceedingly rare if it occurs at all."

The same remarks might well apply to whooping cough and mumps and possibly to chicken-pox. Such regulations defeat their own end as they cause the public to conceal cases of minor affections in the home, when a physician is not considered necessary.

An amendment respecting the tenure of office of medical officers of health might well be introduced which would tend to improve the public health service of our province. As is well known to us all, a medical officer of health who pursues an aggressive campaign in the public interest cannot always depend on the support of the council which appoints him, which body, changing from year to year, almost invariably has among its members some individual who conceives it a matter of duty to harass and worry the guardian of the public health, to the limit even of securing his retirement if he can obtain sufficient support from his fellow aldermen. The Ontario Act now has a provision that a medical officer of health cannot be dismissed without the consent of the provincial board of health, and thus some good and sufficient reason, apart from politics, religion, or the whims and vagaries of aldermen, must exist to secure his dismissal.

In conclusion, I desire to say there are many commendable things in our Health Act, and it is probably as free from defects as the majority of such acts. But in my opinion it is desirable that it should be made as simple, sane and practicable as possible by eliminating all debatable and ambiguous terms, and reconstructing its regulations so as to make them more consonant with the latest developments in public health service. If I have succeeded in this somewhat hastily prepared paper in indicating how this Association may assist in improving our present Provincial Health Act, I am well repaid. Without the active interest and support of the medical profession, no movement in the direction of improvement in the public health administration can hope to achieve any large measure of success, and as Disraeli has said: "Public health is the foundation upon which rests the happiness of the people and the welfare of the State."

N.B.—Since the above paper was written, the Supreme Court of Alberta has decided that the compulsory clause of the vaccination law conflicts with the Truancy Act, and as such, it was declared *ultra vires*. The provincial board of health will introduce an amendment to the Act at the next sitting of the legislature which will overcome this legal difficulty.

Case Reports

PARALYSIS FROM FRIGHT

BY LT.-COL. R. D. RUDOLF, M.D. (EDIN.), F.R.C.P. (LOND.)

No. 1 Canadian General Hospital, France

THE following case is an example of hemiplegia produced in a previously healthy lad by a sudden fright. The result was a condition exactly resembling and probably of the same nature as the same state occurring in hysteria.

Case. A private, aged twenty, admitted into this hospital on December 31st last, with a diagnosis of "boils and facial paralysis."

History. Good family history. Mother alive and well. Father was a policeman, and was killed in France last spring. Only brother was also killed in the same action. One sister, alive and well. Patient was always healthy and never suffered from any disease. He went to India four years ago as a bugler. He had only been there eight weeks when he got the fright from which dates his paralysis. It seems that on the evening of a very hot day he went on duty for the first time. He was sentry on the dead-house and his orders were to kick at the door of the house every fifteen minutes to scare away the rats. He was very nervous, but at nine o'clock kicked at the door as ordered and nothing happened. At a quarter past nine he did so again when to his horror a voice cried out from within. The exact words were "w'at the 'ell are you kicking about?" It appears that before the boy went on duty a guard had placed a drunken soldier in the mortuary to sober up and had omitted to tell the new sentry that this had been done. In terror the patient fled towards the guard room, but fell before he reached that haven. He was some time later picked up unconscious and taken to the hospital. He remained unconscious for some six days and when consciousness returned it was found that he could not speak and that his memory kept leaving him. All the left side of the body was useless and he could not close the left eye. He was also numb over the whole left side and said that numerous medical officers tried him with pins but he could not feel at all. The urine had to be removed

by catheter a number of times. He remained in this paralyzed and numb condition for about six months, the first three of which were spent in India; afterwards he was sent home to England. Since then he has very gradually improved and managed to reënlist some months ago under a different name.

Present condition. Patient is a well-grown lad and looks healthy. He cannot close the left eye, but otherwise any facial paralysis is not evident until searched for.

The muscles of the left limbs are well developed, but distinctly weak. The grip of the left hand is poor and he cannot stand on the toes of the left foot. The left knee jerk is slightly greater than that of the right. Plantar reflex is absent on the left side. As stated, he cannot close the left eye and when he smiles or tries to show the upper teeth the paralysis of the left face is evident. He cannot whistle. He can wrinkle the left brow up almost as well as the right. The tongue projects without deflection to either side.

The fields of vision and the faucial reflex are normal.

The sensation of touch is diminished, but is present all over the left side. The sense of heat and cold and of pain is absolutely gone all over this side. This includes the side of the tongue, the left nostril and the left side of the genitals.

The patient states that the leg recovered from the paralysis first, then the arm and last of all the face.

Remarks. Here we have a previously healthy youth, who comes of good stock, when put in a position involving high nervous tension suddenly receives a fright. The result was a condition of shock. The same thing is frequently seen in war surroundings, when from the shock of a shell or mine exploding near them, men become unconscious and remain so for days; on recovery of consciousness they are found to be paralyzed in a hysterical-like way or to have lost some of their cerebral functions. Thus we see cases of loss of memory or of personality, blindness, deafness or deaf-mutism. Without having any history of these cases, one would be apt to consider them as hysterical, and probably they really are so. Yet Dr. Crile, of Cleveland, has well demonstrated that severe fright in animals will produce changes in the cerebral cells that are easily demonstrable, and who knows that in these cases also there are not definite nerve changes—an organic as well as a functional disturbance. It is four years now since this patient got the fright, but from his youth, his good heredity and from the very definite cause for his trouble probably the prognosis is still good, and the chances are, in my opinion, that he will completely recover.

CANCER OF THE STOMACH AND PELLAGRA IN THE
SAME PATIENT

BY F. W. ROLPH, M.A., M.D.

Toronto

MRS. L., aged forty-one, born in India, but taken to Scotland while still an infant to recover from cholera, came to Canada at the age of seventeen, and since that time lived in Montreal and Toronto.

I first saw patient in March, 1915, at which time she complained of weakness, difficulty in swallowing, and profuse expectoration.

She was a small, slight woman with fair complexion, and appeared very weak and anæmic. Family history was unimportant, except that mother died from cancer of the stomach. She had had pneumonia, but was otherwise in fair health until two years before, when she began to lose a great deal of blood at her menstrual periods. For this trouble, she entered the Toronto General Hospital in December, 1914, and while there, had her uterus removed for a fibroid, and at the same time, her appendix for a chronic inflammatory condition. At that time her blood showed Hb. 27 per cent. R.B.C., 3,200,000, W.B.C. 6,200, and a note was made of the expectoration of a frothy sputum, although nothing abnormal could be detected in the lungs.

I had her re-admitted to the hospital on March 19th, 1915. She was now expectorating between one and two pints of a frothy colourless fluid, each day. It contained some mucous, was alkaline in reaction, and appeared to be coming from the submaxillary glands which were enlarged. A stomach tube was passed, with only slight difficulty, at a point sixteen inches from the incisors, the end of the tube being smeared with fresh blood. The gastric contents showed lowered acidity, but the examination was of little value on account of the admixture of blood.

The difficulty in swallowing was intermittent, at times she could take solid food with little difficulty, while again even fluids were regurgitated. The x-ray examination did not show any

obstruction. There was no abdominal tenderness, no palpable lymph glands in the superclavicular fossa, and no œdema. The blood showed Hb. 35 per cent., R.B.C., 3,980,000, W.B.C., 3,980. The urine was normal. There was glossitis and pharyngitis.

The diagnosis was carcinoma of the lower end of the œsophagus, and the patient left the hospital without showing any improvement after a month's stay.

I saw the patient again at her home, towards the end of June and her condition was deplorable. Both sides of the face and the backs of the hands and forearms were covered with a reddish brown, sunburn-like rash, she was fearfully emaciated, the saliva was being continually expectorated, and most of the time she was quite irrational. She was at once removed to the hospital, with a diagnosis of pellagra, and yeast was administered as often and in as large quantities as possible. Either from this treatment or from the hospital care, there was some temporary improvement both in the appearance of the rash and in the mental symptoms, but it did not last long. Hallucinations and maniacal excitement returned, muscle spasticity and tremor supervened, and shortly before death paralysis of the right arm showed itself. She died on July 6th.

The autopsy revealed carcinoma of the lesser curvature of the stomach involving the cardiac orifice, which was filled with a moveable portion of the growth, acting like a valve (this no doubt explained the greatly varying ability to swallow food). There were nodules over the greater curvature and in the liver, and the mesenteric glands were extensively involved. The right lateral sinus was thrombosed, the clot extending into the jugular vein. The backs of the hands, the forearms, and the face showed peeling of the epidermis with weeping, slightly bloodstained surface underneath.

The priority between these two diseases is difficult to determine. The excessive salivary secretion, which was evidently present even at the time of her gynæcological operation, is a common symptom of pellagra, but on the other hand the appearance of the growth, post mortem, showed that it must have existed for some time.

Pellagra is of course a rare disease in Canada, but well marked cases of it do occur from time to time, and I believe it is altogether probable that mild and atypical varieties are much more common than is generally supposed.

SARCOMA OF THE INTESTINES IN A CHILD SEVEN YEARS OF AGE

BY L. S. MACKID, M.D.

Calgary

D. G. C., age seven, male. Small child fairly well nourished, not very robust and yet not sickly. Had measles in the spring (May) of 1914. Has not had any of the other children's diseases. Family History. Negative.

Present History. On the morning of August 19th, he complained of pain in the abdomen which was general, but if anything a little more severe in the epigastrium than in any other area; more of the nature of a general soreness. This gradually left him as the day wore on and by evening was better. In the morning he was feeling a little better but did not feel like playing around. The bowels moved well as the result of a purgative given and towards evening he was much better.

On August 21st, his mother felt a lump in the right side which was freely moveable but soon disappeared on account of commencing abdominal distension. In the evening there was again the abdominal pain which was followed this time by vomiting. The vomitus was partially digested food. On August 22nd, he was first seen by a medical man who gave some calomel which was effective for the bowels but apparently did not relieve the distension. Urinalysis negative.

On August 23rd, the child came under our care. There was no complaint at this time except for some abdominal soreness. Examination showed a very much distended abdomen with the abdominal veins much enlarged. No special tenderness could be elicited on palpation and no mass could be made out. Rectal examination showed a large mass lying across the pelvis and this was tender to touch. The bowels were constipated and there was no passage of flatus. Temperature 97°, pulse 112, respiration 26. Was passing urine in normal amount and without difficulty. He

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did not look especially sick. An S. S. enema was given which was returned partly coloured, no flatus; this was repeated with the same result. A third one was given with one grain of menthol in it. This was more effectual, the result being a very offensive stool of a dirty brown colour and a good deal of flatus. A blood count gave a white count of 18,000 with 90 per cent. polymorphs. There was no great change in his condition for the next few days except that the distension remained about the same and there was free fluid being formed. The temperature remained subnormal until August 28th, when it rose to normal; pulse 128, and respiration 34. On one or two occasions the patient became very cyanotic but this passed off very readily. Steadily losing weight. He did not complain of hunger, and took soft nourishment well, he also retained two enemas of raw linseed oil and milk. On August 28th, a slight tinge of jaundice made its appearance and this from now on took on a deeper tint. We could not make the symptoms fit in with any of the usual abdominal complaints and finally made a diagnosis of malignancy, possibly sarcoma. The diagnosis was based on the continued loss of weight, persistent distension, constipation, and the rapidity of the disease. We could not make the leucocytosis fit in and that was very misleading. A consultation was held with Dr. Neff, of Spokane, who partially agreed with our diagnosis and advised operation.

The operation was done under novocaine and gas. A median incision was made and on opening the peritoneum a large quantity of an orange-juice coloured fluid escaped from the abdominal cavity. The omentum appeared in the wound and was found to be very friable and full of solid friable nodules. A loop of the intestines (ileum) appeared, on the omentum being pushed aside, but it could not be delivered into the wound. This loop was about six inches long and two in diameter, ivory white in appearance and of solid consistence. The same formation extended well into the mesentery which was also full of separate nodules. The patient's condition would not allow of further examination so the wound was closed with drainage. The patient died about two hours later.

The post mortem showed:

Appendix about six inches long and one solid mass of this new tissue.

Omentum: full of small nodules of the same tissue formation.

Mesentery: same formation. The omentum was attached at one or two spots as if ulceration was about to take place.

Intestines: all along the mesenteric junction was the same tissue formation and in several places this new tissue completely surrounded the lumen. The lumen was not constricted nor were there any hæmorrhagic areas in the mucous surface.

Gall-bladder and bile ducts: one solid mass of new tissue.

Kidneys: full of small isolated areas.

Spleen: commencing infiltration here also.

Microscopical examination of tissue: small round-celled sarcoma.

The interesting points in this case are: the age of the child, seven years; the extreme rapidity of the disease (less than three weeks); the presence of a high leucocytosis—90 per cent. polymorphs; the enormous extent involved in the short time, and the vagueness of the symptoms present.

A WELL-EQUIPPED hospital is to be presented to Russia by certain Americans. It is the intention to expend the sum of \$225,000 on the unit, this amount to include the cost of transportation and maintenance for one year. The hospital will be under the patronage of the Grand Duchess Tatiana.

It has been decided to hold a sanitary conference at which delegates from the allied nations shall be present, when questions of sanitation that have arisen in connexion with the war shall be discussed. A preliminary meeting of the French delegates recently took place at Paris under the presidency of M. Santoliquido, the Italian hygienist.

Editorial

ORTHOPÆDIC AFTER-TREATMENT OF CANADIAN WOUNDED

OUR attention has been drawn to a letter which appeared in the *Medical Journal of Australia* during January, 1916. It is entitled "Orthopædics and the War." It says, in part, that a special unit has been sent from Australia to deal with venereal diseases amidst the Australian troops at "the Front", and asks whether there should not be a further application of this principle of specialism in military surgery at the present time. To any one, it says, who has had an opportunity of examining numbers of *returned wounded* it is evident that a considerable proportion of the cases consists of men who have suffered from gunshot wounds of the limb bones with accompanying lesions of muscle and nerve. They return to Australia with limbs likely to be permanently impaired in function, to be a charge on the Commonwealth for the rest of their lives. The writer claims that this condition of affairs might be greatly improved if these wounded and maimed were placed under the care of surgeons who take special interest in orthopædic work. The work of Robert Jones, of Liverpool, he says, gives an example which, if followed, would save over and over again to the Commonwealth in pensions alone the cost of the personnel and equipment. "Why delay longer?" Why not "Do it now".

In an editorial comment on this letter in the same journal it is suggested that, on the arrival of such patients in England or Australia, orthopædic surgeons might take charge of these wounded soldiers, and without haste or excessive precipitation, map out and inaugurate the plan of treatment suitable for each case.

Do the people of Canada realize that the truth so clearly set forth in this letter applies equally to Canada as to Australia?

The whole question is one of national economy, it is not a question which should be left to the organization of the Army Medical Corps whose labours in caring for the most recently wounded are arduous enough.

It may be inexactly estimated that three quarters of the wounded which arrive at our base hospitals are suffering from what, in the broadest sense of the expression, may be termed orthopædic affections. In England Mr. Robert Jones, the world-known master of orthopædic surgery, has established a hospital for such patients at Alder Hey. Has Canada done likewise? Have Canadians done anything to systematize, to supervise the work being done amongst such, our maimed fellow citizens? Or, on the contrary, has our desire to so increase our Imperial fellow-citizenship allowed us to see our wounded divided amongst the many and yet noble institutions of England with the result that we have neglected this most important step of organization and allowed our wounded heroes to be sent to hospitals perhaps entirely unsuited to the special affections from which they suffer?

It is true that the hospitals of England have done and are doing a great and meritorious work for all wounded Britons irrespective of which part of the Imperial Federation they belong, but this is more than an Imperial question. It is a question of national economy and Canadian national economy. This has scarcely been realized as yet. Before this war is over there will be thousands of wounded soldiers who are potentially claimants, and who deservedly will be claimants, for future government support. Is Canada doing all in her power to assure that everything possible is being done to conserve the earning power, or are her efforts directed solely, although nobly, to the assuaging of present pain and the immediate cure of the wounds from which our afflicted suffer? A Commission has been formed to study the training, in

useful occupations, of the wounded. Its members deserve all encouragement. They are embarked on a great and useful work. But what about the "mid-time"? Is everything being done to assure that every possible joint, muscle and nerve is being conserved and developed by surgical skill to fit these men for their future lives in our great Dominion. It is true that many will be forced to become the wards of a grateful country, but have we assured that they will be as independent as possible of government help—that they will be as capable as possible of enjoying full citizenship in, and the pleasures of developing, a country for which they have risked their all?

Organization and segregation are what Canada wants. There are many good Canadian surgeons in Canada, in England, and in France to-day whose studies, whose life work has particularly suited them for this effort at conservation. Are their abilities being used to best advantage or are they lost in the maelstrom of army surgery? Are the Canadian wounded segregated, sent to the Canadian base hospitals best suited to the treatment of the injuries from which they suffer, or is their destination simply a question of chance? We do not doubt the efficiency of treatment which has been meted out to each and every Canadian, but this is more than a question of efficient treatment for the saving of life, it is a Canadian economic question for the consideration of Canadians. Are the lives of our wounded being conserved for future usefulness—for the upbuilding of Canada—or, on the contrary, are lives being saved for existence alone. Has any real effort been made to profit by the work of other countries or are we Canadians following, only, traditional army medical methods. These questions are worthy of our profoundest thought. Canada, the Canadian Government, has done so much in this war that is great, that is meritorious, that it is possible that this phase may have to the present escaped attention now to become a fixed policy of our eternally vigilant Department of Militia.

TRENCH FEET

IN this issue is published a very interesting paper on the condition known as "Trench Feet".

Although very little is known of the pathology of this condition and consequently of the rational treatment, yet this affection has been of so great importance in this war that we cannot refrain from making some remarks upon it.

We first began to hear of this condition in the fall and winter of 1914, when, after the battle of Marne, the Allies had entrenched themselves on the Western front. Now Northern France and Flanders are characterized in the winter months by rain and cold; thus we all appreciated that our troops would be subjected to many hardships in this inclement climate. It was not, however, until some time had elapsed that we realized that by the very nature of the ground in which our soldiers were forced to "dig themselves in" that their's was to be the lot of weary vigil in trenches which, by the necessary character of their construction, would act as ditches or canals for the drainage of the adjacent land, and the collection of the incessant rainfall experienced in the extraordinary weather of the winter of 1915.

The problem of draining these trenches was one for our engineers. According to physical laws they would necessarily in bad weather collect water. It was, and is the business of our engineers to pump them clear, or by some means prevent this accumulation of water in these trenches which are the constant habitation of our defenders.

Early in the fall of 1914, it was found that these physical conditions, apparently often unsurmountable and beyond the skill of our engineers, were telling on our brave men. Certain of them began to suffer from a new condition or malady. Those who were exposed long enough, and were in parts wet enough began to exhibit symptoms. Their feet showed signs of what might be called giant chilblains. They suffer from such symptoms as localized oedema, ecchymoses,

and, in the small proportion of cases, areas of superficial gangrene. The condition of which these are symptoms has been ably described by our collaborator. In the study of medicine the discovery of a new condition alone is stimulus enough to initiate many investigations on the etiology and pathology of the newly described symptoms. These investigations have not, as yet, in the condition under consideration brought forth much fruit, but our ever practical regimental medical officers who live in the trenches and share with the soldiers their hardships have learned a great many things about the prevention of this condition which cannot be too frequently reiterated.

The problem of the prevention is simply the problem of the care of the soldier. It may be said, and said with emphasis, that the number of soldiers sent from the firing line because of this condition is in inverse proportion to the efficiency of the battalion commander under whom they serve. Until this fact was realized this condition was bound to recur. As an officer commanding a Canadian battalion recently stated, "the company commander who allows such conditions as would lead to this affection amongst the men under his control 'has disgraced himself.'" This statement may seem exaggerated, but it is only in exceptional cases rightly so. Soldiers cannot, and should not be expected to stand in liquid mud, or water often reaching above the knees, when the temperature is at or about freezing point. This is especially true if they are provided only with short leather boots and puttees, but they can endure these hardships if they are properly provided with waterproof boots and warm, dry clothes.

It is understood that the Canadian Government has provided long thigh rubber boots for the soldiers in the trenches. The women of Canada have been indefatigable in providing socks for frequent changes. The company officer can see that the men are kept moving even whilst in the trenches. It is because of these boots, the frequent

changes of socks available, and the exercises suggested combined with the personal supervision of the junior and senior officers of the Canadian forces that our particular divisions have been remarkably free from what in the past had proven to be a veritable scourge.

It is felt that the study of this condition simply emphasizes the importance of carefully thought out clothing and protectives for our soldiers. This study, so often neglected in the past, is most fruitful. It has long been known that the steel helmet protects against a very great number of shell wounds. It has long been known that proper fitting boots so protect the soldier's feet that he is able to undertake marches of very much greater length and duration than the soldier supplied with ill-fitting and improperly shaped foot-wear. It has long been realized that clothing which is warm and, at the same time, light, permits our soldiers to bear those hardships which are unavoidable in such a campaign as we are presently engaged in. It behooves all Canadians to interest themselves in these subjects, which should not be left to the military authorities alone. The stimulation of an interested public keeps the authorities ever interested and ever progressive. The Canadian Department of Militia and especially our Minister have done wonderful work. At the same time friendly criticism and the universal interest of Canadians in our heroic soldiers will not, we feel sure, be taken amiss by our friend and admired Minister in charge of such affairs. We know that he has arranged for protecting our soldiers with steel helmets. What provision has been made for the continual study of their clothing we have not heard. We feel proud of the fact that the Canadian soldiers are better provided with rubber boots than are most of their fellow-soldiers. At the same time we cannot help realizing that in the study of many of these things such, for instance, as proper boots to protect them on the march, and in their daily life, medical men who have interested themselves in these things would be of very great help. Strong

boots and lasting boots have been the object of the Militia Department, but have we succeeded in getting any further knowledge in the planning of a boot which permits of a full range of movement of the foot and, at the same time, acts as an efficient protection, or has the manufacturer been the arbiter of such questions?

CAPTAIN F. A. C. SCRIMGER, V.C., M.D.

IT is nearly a year since the heroic action of our troops at Ypres and Langemarck won for the name of Canadians a dignity and a sacrificial lustre undimmed by comparison with the greatest deeds of history. As is well known, the fiercest part of the struggle and the heaviest casualties were shared by the 13th and 14th Battalions, units raised in Montreal, numbering among their officers Major E. C. Norsworthy and Captains Guy Drummond, C. N. Williamson, W. C. Brotherhood, and C. F. Stacey.

Some two months later the news reached Canada that the opportunities for the exercise of skill and devotion which the terrible occasion offered, had brought to the medical officer of the 14th Battalion, himself a Canadian, the high honour of the Victoria Cross. A wounded officer, Captain MacDonald, of London, Ontario, whose life Captain Scrimger saved under circumstances of peculiar physical strain, made the facts known, and on July 21st, the doctor was summoned to Windsor, and received the decoration, pinned on by the King's own hand.

The event was mentioned at the time in the *JOURNAL*, but the full details have not reached our readers. Captain MacDonald's own account, given to Windermere, was published in the *Montreal Star* on July 16th, 1915, as follows: "I was in the front of the Canadian headquarters staff on April 25th, which was the third day of the terrific St. Julien fighting, when I was hit on the neck and shoulder. I was dragged into a building where Captain Scrimger dressed my

wounds. A few minutes later German shells found the building and set it on fire. The staff were forced to abandon the building and left me there as an apparently hopeless case. But Captain Scrimger carried me out and down to a moat fifty feet in front, where we lay half in the water. Captain Scrimger curled himself round my wounded head and shoulder to protect me from the heavy shell fire, at obvious peril of his own life. He stayed with me till the fire slackened, then got the stretcher bearers and had me carried to the dressing station. This, however, is only one of many incidents of Captain Scrimger's heroism in those awful three days. No man ever better deserved the soldier's highest honour."

The following additional details are taken from a full account recently published in the *British War Weekly* for January 22nd, last: "Of the three Canadian V.C. heroes, Captain Francis Alexander Caron Scrimger, alone lives to wear the bronze medal. Throughout the fierce fighting of April 22nd to 25th, at St. Julien, Captain Scrimger displayed continuously day and night the greatest devotion to duty among the wounded. On the afternoon of the 25th, the fighting was very fierce, and the brave Canadian doctor had his hands full attending to the wounded. He was in charge of an advance dressing station in some farm buildings. The enemy commenced a very heavy bombardment of the temporary hospital, and the inmates were in imminent risk of being killed. Captain Scrimger remained perfectly cool and was able to quiet the fears of his wounded charges. He gave orders for their removal and went about apparently wholly unconcerned amid the falling shells assisting the orderlies. A Canadian officer, Captain MacDonald, was standing in front of a stable when he was hit on the neck and shoulder. Captain Scrimger saw him fall and promptly dragged him into the building, where he dressed his wounds which were serious. Rather than leave the officer to die there the gallant doctor carried him out and down to a moat in front where they lay half under water (on the side of an

earth bank) where he protected the wounded officer from falling earth which threatened to bury them. They were under heavy shell fire all the time. When the fire slackened he went out to find the stretcher bearers and brought them back and they removed Captain MacDonald to the safety of a dressing station."

It will be seen from the above statements, which are accurate in all details, that the value of Captain Scrimger's action lay not only in the fact that he shielded with his own body the person of a wounded man, supporting by his back through several hours the wall of the falling trench, but also, in the concluding words of the announcement of the *London Official Gazette* of the honour bestowed upon him, that during the three days during which the battle raged he "displayed continuously day and night the greatest devotion to duty." Since then he has remained at the front sharing the dangers and the opportunities of the firing line, until recently invalided to London by an attack of blood poisoning from which he is fortunately recovering.

Captain Scrimger is the son of the late Rev. John Scrimger, D.D., Principal of the Presbyterian College in Montreal, and is a graduate and member of the Teaching Staff of McGill University.

There are undoubtedly many others of our medical men who have done, unnoticed, deeds of equal service in the great extremity to which they are called at the present time, but Captain Scrimger's action stands out as an example of the real meaning of the heroism by which the Victoria Cross is won. A son of the Scottish manse, he has been true to the tradition of his fathers, and has shown those qualities of quiet devotion to duty, cool presence of mind, physical endurance, and forgetfulness of self, which together constitute the high virtue of manliness and which are the legitimate outcome of the daily task well done.

THE MILITARY HOSPITALS COMMISSION

THE *Military Hospitals Commission Bulletin*, recently issued, gives a full account of the work of the Military Hospital Commission, and its coöperating associations, together with a statement of the regulations governing pay, subsistence allowance, and general matters concerning members of the Canadian Expeditionary Force who have returned from the front. Other bulletins will be issued from time to time by the Commission.

The objects of the Commission have already been stated in the JOURNAL—the provision of convalescent homes and medical treatment for returned invalided and wounded soldiers and, when necessary, for men who have enlisted, but have not yet proceeded overseas; the vocational reëducation of those who through disability might be unable to follow their previous occupations; and the installation of the necessary machinery, in the form of provincial commissions and local committees, to provide employment for the able-bodied as well as the disabled men at the close of the war. As arranged at the Ottawa conference in October last, sub-commissions have been appointed by each provincial government, and these in turn have appointed local committees. The question of employment has been placed in the hands of these sub-commissions and investigations are also being made by them into the facilities which exist in the various provinces for technical education and for land settlement and reports upon these subjects are in process of preparation. Voluntary aid and welcome committees have also been appointed in numerous centres, some of which render financial help, when needed, to the men and their families.

Convalescent homes have been opened at Sydney, Nova Scotia; St. John, New Brunswick; Quebec; Montreal (3); St. Agathe des Monts; Kingston (2); Toronto (2); Hamilton (2); London, Winnipeg, Calgary, Esquimalt, Ottawa, and Regina; and additional homes will be opened in the near future

at London, Winnipeg, and Port Arthur. At the present time some thirteen hundred men are undergoing treatment as, in the majority of cases, in-patients of the various convalescent hospitals. Valuable assistance in the furnishing and maintenance of these homes is rendered by local voluntary committees and associations.

On arrival at the discharge depot the men are taken before a medical board consisting of three members. They are then placed in one of three classes:

Class 1. Men for immediate discharge without a pension. (a) Unfit for overseas service, but able to take up their previous civilian occupation. (b) Disability not the result of service or involving claim as the result of or aggravation by service.

Class 2. Men whose condition may be benefitted by further medical treatment or rest in a convalescent home, hospital, or sanitarium.

Class 3. Men having a permanent disability which would not be benefitted by further medical treatment (such disability due to or aggravated by service). These cases will be considered by the Pensions Board, and they will receive whatever benefits special instruction or appliances can give them.

Before leaving the discharge depot the men are supplied with suitable clothing and with a sum of money sufficient for their immediate needs; the remainder of a man's pay is forwarded to the paymaster of the district to which he is going. Men in Class 1 are entitled to their arrears of pay plus fifteen days' pay and subsistence allowance. Married men in Class 2, or single men who are the sole support of a widowed mother, receive accrued pay, plus one month's advance pay and subsistence allowance. Other single men receive the same less subsistence allowance. Men in Class 3 receive a sum on account of accrued pay, plus one month's pay and subsistence allowance, until the date of their pensions. Thus a private admitted to a convalescent home receives free treatment plus

his pay of \$1.10 a day; and if he is married his wife receives a separation allowance of \$20 a month. Privates in Class 2, whether married or unmarried, who as out-patients are permitted to go to their homes receive in addition sixty cents a day as subsistence allowance. Since a number of cases have arisen in which men who have been placed in Class 1 and discharged have been found to be unfit to earn their living and to require further medical treatment, arrangements have been made whereby such men are reëxamined, re-classified, and re-instated on pay and allowance from the date on which they were previously paid up. British or other allied army or navy reservists, who have left Canada during the period of war for active service, will be dealt with exactly as members of the Canadian Expeditionary Force.

The Commission is devoting serious attention to the functional and vocational reëducation of returned soldiers who are unable to carry on their former occupations. Mr. T. B. Kidner, who has had much experience in such work, both in England and Canada, has been appointed Vocational Secretary. It has been realized that both physical and mental training must be given concurrently in order to obtain the best results and the value of occupation has been duly considered. Schools have therefore been established at the convalescent homes where instruction is given to the men in general education and in such manual work as will prove recreative. In England similar work has been commenced at Cliveden by Lord Astor under the auspices of the Lord Robert's Memorial Workshop Scheme. This phase of the Commission's work is beset with grave difficulties and progress must of necessity be slow. It is the intention that another bulletin shall be issued before long which will deal more particularly with this branch of the work. The Commission is also conferring with the various provincial governments with a view to the formulation of a definite land settlement scheme, as it is expected that a considerable number of men who return from the front will be anxious to take up land.

SPECIAL SUMMER COURSES TO PROVIDE EARLY GRADUATION FOR MEDICAL STUDENTS

THE universities of the Dominion are to be congratulated on the stand they have taken in the matter of offering special summer courses to enable their senior students to graduate some months in advance of the regular time set for their graduation. The question was placed before the medical faculties in a letter from the military authorities at Ottawa asking if such courses could be offered, provided it might be shown that a military necessity existed for such action. Later, it was indicated by them that this necessity did exist and there was prompt response on the part of at least three of the large Canadian universities. Toronto, Queen's, and McGill have signified their intention of giving summer courses for fifth year students, graduating them at the end of 1916 instead of the spring of 1917. It is understood that practically all the universities in the Dominion will provide these courses. Only those who have been engaged in teaching can realize what this means to both teacher and student. For the student it means continuous study for a period of fifteen months with a short break during the hot part of the summer, and for the teacher continuous teaching for a period of twenty-three months, since after the graduation of the present final year men another session of eight months must be entered upon. It cannot be said that this move is educationally sound, but these are exceptional times and it is hoped that by extra effort, on the part of both student and teacher, the men who will be graduated in this way will reflect no less credit upon their Alma Mater than those who have received their degree at the end of the regular course.

This undertaking is further evidence of the loyalty and patriotism of a profession that has already given many of its members to the service of the Empire, and it must be evident that those who have remained at home are doing service at least not less valuable than those who have been privileged to go overseas.

ONTARIO MEDICAL ASSOCIATION MEETING

THE attention of our readers is called to a notice of the coming meeting of the Ontario Medical Association to be found elsewhere in this issue. The programme prepared by the executive is an excellent one and should attract all branches of the profession. There are in addition some questions of national importance to come before the meeting, the most notable one being perhaps the Workman's Compensation Bill. The great questions of medical education, and the standing of the profession as a whole in the province of Ontario, the relationship between the degree-granting body, the University, and the license-granting body, the College of Physicians and Surgeons, are all of paramount importance and require the most careful consideration and discussion. In addition we note that papers of interest are to be given by some of the best known members of the profession on this continent. It may safely be said that at no time in the history of the profession has there been greater need for organization and coöperation than at the present moment, and there seems no doubt that this will be one of the best meetings in the history of the Ontario Association. We would bespeak for the executive a large attendance.

THE publication in the present number of a paper by Sir James Grant on "Incidents in the life of a physician" draws attention to the difficulty there was of adding to the sum of medical knowledge before the days of scientific medicine. The writer, in 1861, tried the effect of vaccinating several cases of skin disease with vaccine virus. As the results were successful, he reported them in the *Medical Times and Gazette*, drawing the conclusion that "vaccine was one of the most powerful blood purifiers we possess". This, which was perhaps the earliest attempt at serum therapy, was not followed by an advance, either in the knowledge or treatment of disease. It was the record of a single empirical

experiment and because the discovery of the bacterial origin of many diseases had not as yet been made, its possible significance was not even suspected. Now, in the light of present day knowledge and the growing importance of serum therapy, it is an interesting historical fact.

A MEMORIAL to Florence Nightingale in the crypt of St. Paul's Cathedral was unveiled by the Queen on February 14th. It is placed on the wall of the archway which leads from the tomb of Nelson to that of Wellington, and is a half-length portrait of white marble.

AN effort is being made by the general hospitals throughout the Dominion to induce the government to abolish the duty on pure alcohol. The heavy duty on this commodity makes the price in Canada extremely high, and as it is used in hospitals in large quantities, the matter is one of importance to these institutions, particularly in view of the financial conditions of the present time.

IT appears that certain physicians in the province of Ontario have taken advantage of the free distribution of vaccines and sera to sell them at large profits to patients. A recent amendment to the provincial Health Act imposes a fine of one hundred dollars, or three months' imprisonment, upon any person who hereafter sells publicly or privately any of the free vaccines supplied by the government. In making this announcement, the Provincial Secretary stated that 300,000 soldiers had been inoculated against typhoid with vaccine supplied by the Ontario government free of charge. The regular price of this anti-toxin would have been seventy-five cents per head, or a total sum of \$225,000 for the number of men inoculated. In addition to typhoid anti-toxin, vaccines to the value of \$7,000 were supplied free of charge by the government during the month of February.

THE Swedish War Hospital, which has been established at Paddington Street, London, was formally handed over to the War Office by the Swedish Minister, Count Herman Wrangel, on February 21st, as a token of international solidarity. Accommodation is provided for thirty in-patients, and a number of out-patients, and the hospital has been equipped with an operating theatre and an *x*-ray installation; accommodation for the staff has been provided in adjoining premises.

THE depletion of the ranks of the profession as a consequence of the war has added to the seriousness of a problem that already was becoming acute in the sparsely populated districts of the Middle West. In such districts it is growing increasingly difficult to procure medical attention and a number of lives have been lost through the lack of proper medical care. The Honourable George Langley recently introduced an amendment to the Rural Municipalities Act of the province of Saskatchewan, whereby municipal councils should be empowered to vote a sum, not exceeding \$1,500, sufficient to retain a medical man in the municipality. He proposed also that municipalities should be authorized to make grants towards the erection and maintenance of hospitals in such districts, and for the provision of nurses, suggesting that, when advisable, one hospital should be established to serve several municipalities. The necessity for providing some relief in maternity cases especially was emphasized by several members in the House, but some were of opinion that such subsidization of medical men would result in abuse, and that inexperienced doctors and those who had been unsuccessful elsewhere would take advantage of such an arrangement. Others again thought that such a measure should only be put into operation on the popular vote of the municipality. It was eventually agreed that the amendment should be carried and that the proposal should be tried as an experiment.

Book Reviews

INSTINCT AND INTELLIGENCE. By N. C. MACNAMARA, F.R.C.S.
Toronto: McAinsh & Company, Limited, 1915. Price, \$2.00.

This clearly printed book, in addition to its general biological interest, will have particular value for educationists and others upon whom devolves the care of the young. The author, who delivered the Hunterian Oration for 1901, is a writer of experience who knows how to accept the results of modern research in the domain of the behaviour of organisms, from amoeba to man, and to weld them into a homogeneous whole.

Reminding his readers that "modern scientific ideas can accept no theory which is not founded upon continuity of phenomena, whether physical or psychical", he has succeeded in carrying conviction to the thought that the manifestations of instinct, often apparently mysterious and unaccountable, nevertheless rest upon a factorial and hereditary basis.

The basal ganglia, including under this term the *corpora striata* and the *optic thalami*, which are among the most ancient components of the vertebrate brain, are the centres where energy, received through the sense-organs, is transmuted into instinctive processes; whilst the *neopallium*, which comprises the association areas of the cerebral cortex is the centre where energy, derived from external and internal sources, is diverted into intellectual channels. Sensory impressions and instinctive processes are modes of energy; sense-organs are the receptors, nerve-cells the transformers of energy.

The importance of the basal ganglia is well illustrated by the instance of birds who are supreme in the care of their young and in other instinctive and emotional qualities. The brain of birds is constant in form and "its most characteristic feature is the great size of the basal ganglia".

The successive chapters lead steadily up to practical conclusions, without being overburdened with technical phraseology. The author takes into account the cumulative effect of the incidence of different modes of energy upon living matter during geological time, and shows that the cerebral organization is the resultant of present needs and past history, capable of being modified by training and intensified by practice.

Some trifling slips and inversions have crept into the text. Perhaps the author has dealt a little too freely with the problematical nervous system of *hydra* (p. 35). The hydroid *obelia* (p. 38) does not give rise by sexual processes to medusæ, but *vice versa*. The terms afferent and efferent are transposed on p. 173 (compare p. 98). Other misprints, few in number, are too obvious to need mention. The misstatement made on p. 103 that "the forebrain contains a cavity known as the third ventricle, whose lateral walls are thickened so as to form the two *corpora striata*," will come as a surprise to the reader who may have been taught that the lateral walls of the third ventricle are thickened by the *optic thalami*. There is some confusion here between the primary and secondary forebrain, but it is confined to this passage and does not run through the text. If the older name thalamencephalon had been retained for the primary forebrain, instead of the newer term diencephalon, perhaps the description would have been less ambiguous.

There is nothing, however, to mar the general excellence of the author's synthetic treatment of his subject, nor to prejudice the main purpose of his work which is to establish "sound ideas as to the education of children."

References are given to previous publications including those of the author himself. The remarkable cases of Laura Bridgeman and Helen Keller are discussed in connexion with the possibilities of attuning the hemispheres of the brain through the medium of the centres of touch. On another plane the capacity of the Java skull-cap is shown to correspond with that of a microcephalic idiot.

INTERVERTEBRAL FORAMINA IN MAN, the morphology of the intervertebral foramina in man, including a description of their contents and adjacent parts with a special reference to the nervous structures. By HAROLD SWANBERG. Chicago: Scientific Publishing Company, Chicago, 1915. Price, \$1.75.

This interesting book in its first part presents completely, yet concisely, a systematic description of our general knowledge of the intervertebral foramina. In its second part, the detailed results of Swanberg's investigations are shown in the form of excellent plates from which the information can be readily assimilated. It should prove useful to anatomists, and to those dealing with disease of the nerves or bones of the vertebral column.

Books Received

The following books have been received and the courtesy of the publishers in sending them is duly acknowledged. Reviews will be made from time to time of books selected from those which have been received.

INFANT FEEDING AND APPLIED TOPICS FOR PHYSICIANS AND STUDENTS. By HARRY LOWENBURG, A.M., M.D., assistant professor of pediatrics, Medico-Chirurgical College of Philadelphia. Illustrated with 64 text engravings and 30 original full-page plates, 11 of which are in colours. Philadelphia: F. A. Davis Company, publishers, 1916. Price, \$3.00 net.

PHYSIOLOGY FOR NURSES. By W. B. DRUMMOND, M.B., C.M., F.R.C.P., Edin., examiner in biology, Royal College of Physicians. With 81 illustrations. London: Edward Arnold, 41 Maddox Street, W. Price 2s. 6d. net.

AUTOPLASTIC BONE SURGERY. By CHARLES DAVIDSON, M.D., professor of surgery and clinical surgery, University of Illinois, College of Medicine; and FRANKLIN D. SMITH, M.D., clinical pathologist to University Hospital, Chicago. Octavo, 369 pages, with 174 illustrations. Lea and Febiger, Philadelphia and New York, 1916. Price, \$3.50 net.

A TREATISE ON THE PRINCIPLES AND PRACTICE OF MEDICINE. By ARTHUR R. EDWARDS, M.D., professor of the principles and practice of medicine and clinical medicine and dean of the Northwestern University Medical School, Chicago. New (third) edition thoroughly revised. Octavo, 1,022 pages, with 80 engravings and 23 full-page plates in colours and monochrome. Lea and Febiger, Philadelphia and New York, 1916. Price, \$6.00 net.

CANDY MEDICATION. By BERNARD FANTUS, M.D., professor of pharmacology and therapeutics, College of Medicine, University of Illinois, Chicago. 82 pages. St. Louis: C. V. Mosby Company, 1915. Price, \$1.00.

A MANUAL OF HYGIENE AND SANITATION. By SENECA EGBERT, M.D., professor of hygiene and dean of the Medico-Chirurgical College, Philadelphia. Sixth edition, enlarged and thoroughly revised. 525 pages, illustrated with 141 engravings and 5 plates. Lea and Febiger, Philadelphia and New York, 1916. Price, \$2.25 net.

THE PRINCIPLES AND PRACTICE OF SURGERY. By RICHARD WARREN, M.D., M.Ch., Oxon., F.R.C.S., assistant surgeon and teacher of clinical surgery at the London Hospital; senior surgeon to the East London Hospital for Children; examiner in surgery at the University of Oxford. Two octavo volumes of about 700 pages each, with 505 original illustrations. Cloth, \$7.50 net. Lee & Febiger, Philadelphia and New York, 1916.

DIAGNOSTIC METHODS: A GUIDE FOR HISTORY TAKING, MAKING OF ROUTINE PHYSICAL EXAMINATIONS AND THE USUAL LABORATORY TESTS NECESSARY FOR STUDENTS IN CLINICAL PATHOLOGY, HOSPITAL INTERNES, AND PRACTISING PHYSICIANS. By HERBERT THOMAS BROOKS, A.B., M.D., professor of pathology, University of Tennessee, College of Medicine, Memphis, Tennessee. Third edition, 96 pages, revised and rewritten. St. Louis: C. V. Mosby Company, 1916. Price, \$1.00.

A HANDBOOK OF INFANT FEEDING. By LAWRENCE T. ROYSTER, M.D., attending physician Bonney Home for Girls and Foundling Ward of the Norfolk Society for the Prevention of Cruelty to Children. Illustrated, 120 pages. St. Louis: C. V. Mosby Company, 1916. Price, \$1.25.

A SYSTEM FOR CASE-TAKING WITH EXPLANATORY NOTES. By GEORGE WILLIAM ROSS, M.A., M.B., Tor., M.R.C.P., Lond., demonstrator in clinical medicine, University of Toronto; and JULIAN LOUDON, B.A., M.B., Tor., M.R.C.S., Eng., L.R.C.P., Lond., assistant in clinical medicine, University of Toronto. Authorized for use in the Faculty of Medicine, University of Toronto. Toronto: The Macmillan Company of Canada, Limited.

Retrospect of Medicine

TRENCH NEPHRITIS. *British Medical Journal*, 1916, i, 278. Sir John Rose Bradford, *Quarterly Journal of Medicine and Surgery*, 1916, ix, 125.

THIS subject was discussed at some length at a meeting of the Sections of Medicine and of Pharmacology and Therapeutics of the Royal Society of Medicine, which took place on February 15th, last. The discussion was opened by Dr. Langdon Brown, who said that acute nephritis, infrequently met with in civil practice, was rare in the South African War, but very prevalent during the American Civil War when fourteen thousand one hundred and seventeen cases were recorded, the military conditions being then similar to those of the present war. The disease first appeared among the British troops about the beginning of March, 1915, and reports from Vienna indicated that the enemy troops were attacked about the same time. In the British Expeditionary Force up to June, 1915, ten hundred and sixty-two cases of nephritis were recorded and since then there appeared to have been no diminution in the number of cases. The rarity of the disease in the South African and Russo-Japanese Wars, and the fact that it became epidemic after the warmer weather had set in, would seem to negative exposure as a cause of the condition. Other possible causes had been carefully considered, but might be excluded. He was of opinion that the epidemic was due to a specific infection, probably resembling, but not identical with, the organism causing scarlet fever. It was interesting to note the immunity of the Indian troops from nephritis, especially in view of the comparative immunity they enjoyed from scarlet fever.

Sir William Osler described the main characters of the disease as those of ordinary acute nephritis; the œdema, however, was transient and usually local, and general anasarca was rare. Dyspnoea was unusually prominent, and slight fever was sometimes present in cases who had returned to England and was probably more common in the earlier stages. The rapid improvement, which coincided with the disappearance of the dropsy, was remarkable, but the urinary changes and high blood pressure frequently persisted. Severe uræmic changes sometimes occurred without

dropsy and with only high blood pressure, and in some cases albuminuria with casts (chiefly of the hyaline variety) and blood in the urine had been present without any history of œdema. The proportion of deaths, he thought, was greater than was usually supposed. *Post-mortem* examinations made in three cases revealed marked recent tubular and glomerular nephritis; the kidneys were sclerotic; there were no signs of fatty degeneration.

Microscopical sections from six cases were exhibited by Dr. F. W. Andrews. He had failed to find any microorganism in the urine or kidneys, and, histologically, trench nephritis was indistinguishable from other forms of acute or subacute nephritis.

Dr. Mackenzie Wallis said that in trench nephritis there was a definite relation between the severity of the case and the diastase content of the urine. Careful examination of this had failed to reveal the presence of any mineral poisoning; it was remarkably toxic but he had been unable to determine the chemical character of the toxic agent. Inoculation experiments on animals had not resulted in the discovery of any parasite.

Dr. R. G. Abercrombie had seen over five hundred cases in the acute stage of the infection. The most constant symptoms were headache and dyspnœa. The blood pressure showed diurnal variations of from 30 to 60 mm. of Hg. The attacks of dyspnœa were usually nocturnal and were possibly due to the rapid rise of blood pressure. Slight fever was present at the beginning of the attack. Premonitory symptoms, such as bronchitis, pains in the back and limbs, abdominal pains and vomiting were present in about 50 per cent. of the cases. Tonsillitis was rare; laryngitis and tracheitis were more common; convulsions occurred in fourteen cases, mania in four, and amaurosis in three. Herpes and bilateral parotitis were occasionally seen and supported the contention that the condition was of infective origin. In some cases the symptoms suggested pyelitis, cystitis, or prostatitis. In four cases only out of the five hundred death occurred, in one before the end of the first week. His impression was that the disease was infective.

Sir John Rose Bradford, in the *Quarterly Journal of Medicine*, gives an account of his experience of trench nephritis in Flanders, where, with exception of a very few cases, it first made its appearance in March, 1915. He finds that the important symptoms in the early stages of the disease were dyspnœa and œdema. Casts were absent from the urine in more than a third of the cases. In a series of five hundred and seventy-one cases usually both hyaline and granular and, occasionally, blood casts were found. In some

cases smoky or blood-stained urine was passed early in the disease; in cases in which dropsy was present the amount of urine was diminished and sometimes it was suppressed for from twelve to twenty-four hours. In the acute stages uræmic symptoms were common and albuminuria was very marked. Epileptiform seizures and increased arterial blood pressure occurred in some cases, the latter accompanied by severe headache. In a few cases the characteristic dyspnoea was accompanied by the physical signs of pulmonary oedema. Bronchitis occurred in 30 per cent. of a series of two hundred and seventy-eight cases. Sir John concludes by saying that trench nephritis may be described as a clinical entity, characterized by the following five features: The rapid subsistence of a well-marked renal dropsy, the frequent presence of bronchitis and dyspnoea, the severity and suddenness of onset of uræmic manifestations such as epileptiform seizures, the rarity with which inflammatory complications occur, and the extraordinarily low mortality of only three or four per thousand cases. He is inclined to believe that this form of acute nephritis is due to some infecting agent, which causes in the first place some illness, such as bronchitis, a severe cold, or diarrhoea. He comments upon the fact that bronchitis is common among the Indian troops who yet escape the acute nephritis.

REPORT OF THE ROYAL COMMISSION ON VENEREAL DISEASES.
British Medical Journal, 1916, i, 345 and 380.

THE final report of the Royal Commission on Venereal Diseases was issued on March 2nd, last. This Commission was appointed on November 1st, 1913, "to inquire into the prevalence of venereal diseases in the United Kingdom, their effects upon the health of the community, and the means by which those effects can be alleviated or prevented, it being understood that no return to the policy or provisions of the Contagious Diseases Acts of 1864, 1866, or 1869 is to be regarded as falling within the scope of the inquiry."

In the introduction to the report previous legislative enactments are cited, and the opinion of the Commissioners given that no advantage would be gained by a return to the system of the Contagious Diseases Acts, but that better results are likely to be obtained through the diffusion of knowledge and the provision for effective treatment for both sexes under conditions to which no stigma is attached. Reference is made to the introduction of

syphilis into Europe, and to the successful inoculation of animals by Metchnikoff and Roux, from which dates our present knowledge of the cause of syphilis.

The section dealing with the prevalence of venereal diseases is rather unsatisfactory since little reliance can be placed upon statistics with exception of those of the army and navy. This is due partly to the very unsatisfactory system of death certification, and to the lack of available statistics in hospitals and other institutions. In the case of death registration, it is strongly recommended that the certificate be confidential, a reform advocated for years by the British Medical Association. It is recommended also that all institutions that undertake the treatment of cases of venereal disease be required to keep accurate aggregate statistics concerning these cases. As regards the army and navy, the following facts are given: The incidence of syphilis in the navy has declined from 48.92 per 1,000 in 1905 to 28.93 in 1912. No distinct improvement is shown in gonorrhœa. The Mediterranean and Cape stations present the best records, the Home station the worst. In the army the number of recruits rejected for syphilis has fallen from 0.63 per cent. in 1890 to 0.14 per cent. in 1911-1912; and the rate for all venereal diseases has fallen from 224.5 per 1,000 in 1888 to 56.5 in 1912. The corresponding figures for other diseases are 700.9 and 346.4. At the present time the proportion of gonorrhœa to syphilis is 3 to 2. In India the prevalence of syphilis is slightly lower and of gonorrhœa slightly higher than in England. A tendency towards decrease in the incidence of venereal disease is shown by statistics in all the European armies and navies.

As to its prevalence among the civil population, the figures show that syphilis is essentially a town disease. Comment is made on the fact that 50 per cent. of prisoners found to be suffering from venereal disease were discharged in an infective condition. In Borstal institutions for younger prisoners between the ages of sixteen and twenty-one, specially selected as likely to become habitual criminals, of 941 inmates 16.26 per cent. presented one or more signs of congenital syphilis, and in addition 5 showed signs of acquired syphilis. "The figures were carefully compiled and may indicate that mental defects due to this cause conduce to some extent to produce the class of prisoners which come within the scope of these institutions." The results of 1,002 Wassermann tests made by Dr. Bulloch among patients at the London Hospital, specially selected and undergoing treatment for reasons wholly unconnected with syphilis, showed that 10.3 per cent. of the males

and 5.1 per cent. of the females gave positive reactions. Among 1,119 cases of accident and 557 healthy persons examined, 3.58 per cent. were infected with venereal disease, and 491 healthy persons of a somewhat superior class of workers 46, or 9.36 per cent. gave a positive reaction. The serum test performed on all the cases admitted into fourteen asylums during 1914, resulted in a positive reaction in 15.4 per cent. of the cases. The investigation of Poor Law patients carried out by Dr. Mott gave the following result: Epileptics gave 7.4 per cent. positive reactions, insane non-paralytic patients 8.4 per cent., Poor Law patients in infirmaries in London 19.9 per cent., feeble-minded children 8.1 per cent. Mothers of new-born infants in Shoreditch, London, gave 19.7 per cent. positive reactions, in St. Pancras only 6.6 per cent.; in the Shoreditch cases 29 of the mothers were unmarried, and these gave 27.6 per cent. positive reactions.

A consideration of the effects of venereal disease includes comment on arterial disease of syphilitic origin, syphilitic diseases of the nervous system, the possibility of blindness, the fact that syphilis predisposes to cancer of the tongue, and the importance of gonorrhœa in women. Concerning the effect of such disease on the offspring, the Commissioners state: "We have received much evidence showing that both in the fetus and in the child after birth hereditary syphilis is an even more serious disease than the acquired form." Figures are given relating to 150 syphilitic families, which show that out of 1,001 pregnancies 172 resulted in miscarriages or stillbirths. Of 1,100 children in London schools for the blind, 31.2 per cent. were certainly, and in addition 2.8 per cent. probably, due to syphilis; and the figures given for the total number of blind in London give the percentage attributable to venereal disease as certainly 55.6 and probably as much as 58.4. The infant mortality due the disease is twice as great in urban districts as in the country, and the mortality of illegitimate infants is from eight to ten times as high as that of the legitimate. The recorded death rate from syphilis and the three consequential diseases—general paralysis, locomotor ataxia, and aneurysm—would seem to indicate that the prevalence of syphilis is greatest amongst the highest and the lowest social classes.

Admirable clinical descriptions are given in the report of venereal diseases and their effects, both on the person infected and the offspring, and figures are cited to show the tremendous economic loss thus incurred by the nation. It is estimated that the total cost of asylum treatment in England and Wales from syphilis alone is at least £150,000 a year.

The final section of the report contains the recommendations of the Commissioners. The necessity for early and accurate diagnosis of the disease followed by efficient treatment is emphasized, and the advantage of laboratory methods and the necessity for uniformity in the methods adopted is insisted upon. The Commissioners state that "there are good grounds for concluding that eradication of the spirochæte with complete cure, or a total absence of subsequent signs or symptoms of the disease in the majority of cases, can be obtained by 'intensive treatment' when commenced in the primary stage." Physician and bacteriologist should unite in the use of modern scientific methods of diagnosis; existing laboratories should be utilized and, where necessary, others should be established. These should be subsidized by grants from imperial funds to the extent of 75 per cent., the balance to be provided by the municipality. Existing institutions should be encouraged to make special provisions for the treatment of venereal disease, and free public clinics should be established at the hospitals. The different modes of treatment are summarized and the combined treatment by arsenic and mercury, as introduced by Neisser, is recommended for general adoption. The importance of gaining the coöperation of the patient is recognized and it is suggested that a card of instruction should be given to every patient suffering either from syphilis or gonorrhœa. In the treatment of the latter disease the use of suitable injections of some colloidal preparation of silver is advocated. The Commissioners are of the opinion that training in technique is necessary in the case of all medical practitioners who administer salvarsan in the treatment of disease.

Compulsory notification of cases of venereal disease is not considered advisable at the present time, as this would tend to deter the patient from consulting a qualified practitioner and would foster the evil of unqualified treatment at the hands of chemists, herbalists, and quacks. Free and ample facilities for treatment are recommended as a means of combating this particular evil and the Commissioners "strongly endorse the recommendations of the Select Committee on Patent Medicines that all advertisements of remedies for venereal disease should be prohibited."

While legislation to prevent the marriage of persons suffering from venereal disease is considered impracticable at the moment, it is recommended that statutory recognition should be given to the principle that infectious venereal disease constitutes a barrier against marriage, and that protection should be given to a medical man who considers it his duty to interfere to prevent or delay the

marriage of an infected person. This proposal is supported by the high authority of the president of the Probate Court. The recommendation of the Royal Commission on Divorce and Matrimonial Causes that the marriage of an infected person should be ground for the annulment of the marriage by the injured party is also supported by the Commission.

The possibilities of education as a means of prevention are carefully considered. The necessity for the special training of medical men in the diagnosis and treatment of venereal diseases is urged, and it is recommended that "questions relating to syphilis and gonorrhœa should be systematically set in examinations." As to moral education in the schools, personal interviews between the head teacher and pupil are recommended rather than class instruction in elementary schools. It is thought that more should be accomplished in schools where the pupils have reached a fuller age and in the universities by the direct influence of the teacher. Attention is drawn to the way in which certain questions are treated in some books and pamphlets and adds, "We consider that no such publications should be countenanced by educational authorities unless issued with the imprimatur of the National Council for Combating Venereal Disease."

The report concludes with an expression of hope that the publicity given to the matter by reason of this inquiry will lead to enlightenment concerning the dangers of the diseases, and the folly of doing anything to prevent their early diagnosis and treatment.

Res Judicatæ

THE FACTOR OF POVERTY IN SANITATION

THE factor of poverty in sanitary problems was discussed in Washington, November 26th, by Surgeon General William C. Gorgas, whose success in cleaning up Havana and the Panama Canal zone have brought him recognition as America's leading sanitarian. His audience was the Clinical Society of Surgeons, assembled in their twenty-fourth annual meeting. Dr. Gorgas said: "Such sanitary work as is necessary in the tropics is inexpensive, but measures directed against special disease are not the greatest good that can be accomplished by sanitation. Before these great results that we can all now see are possible for the sanitarian, we shall have to alleviate more or less the poverty at present existing in all civilized communities. Poverty is the greatest of all breeders of disease and the stone-wall against which

every sanitarian must finally impinge. During the last ten years of my sanitary work I have thought much on this subject. Of what practical measure could the modern sanitarian avail himself to alleviate the poverty of that class of our population which most needs sanitation? It is evident that this poverty is principally due to low wages; that low wages in modern communities are principally due to the fact that there are many more men competing for work than there are jobs to divide among these men. To alleviate this poverty two methods are possible, either a measure directed toward decreasing the number of men competing for jobs, or, on the other hand, measures directed toward increasing the number of jobs.

"The modern sanitarian can very easily decrease the number of men competing for jobs; if by next summer he should introduce infected *stegomyia* mosquitos at a dozen different places in the southern United States he could practically guarantee that when winter came we would have several million less persons competing for jobs in the United States than we have at present. This has been the method that man has been subject to for the last six or seven thousand years, but it does not appeal to me, nor, I believe, to yourselves. This method is at present being tried on a huge scale by means of the great war in Europe. I do not think that I risk much in predicting that, when this war is over and we shall have eliminated three or four million of the most vigorous workers in Europe, wages will rise and for a long time no man will be unable anywhere in Europe to get a job at pretty fair wages. But I am sure that every sanitarian would much rather adopt measures looking toward the increase of jobs rather than, as we have done in the past, submit to measures that decrease the number of competitors for jobs.

"I recently heard one of the members of the cabinet state that in the United States 55 per cent. of the arable land, for one reason or another, is being held out of use. Now suppose in the United States we could put into effect some measure that would force this 55 per cent. of our arable land into use. The effect at once would be to double the number of jobs. If the jobs were doubled in number wages would be doubly increased. The only way I can think of forcing this unused land into use is a tax on land values.

"I therefore urge for your consideration, as the most important sanitary measure that can be at present devised, a tax on land values."

Obituary

LIEUTENANT-COLONEL Hew Ramsey Duff of the Canadian Permanent Army Medical Corps died of pneumonia in France, where he was on duty with No. 5 Stationary Hospital, C.E.F., his death being announced in the casualty list published on February 11th, last. Lieutenant-Colonel Ramsey Duff was born at Kingston in September, 1857, the son of the late Lieutenant-Colonel John Duff, police magistrate of that city. He was educated at the Kingston Grammar School and at Queen's University, where he took the degree of M.D. in 1884. He was in practice at Kingston, and had been connected with the Canadian Army Medical Service throughout his career; he was president of the Army Medical Corps Board of Survey for Ottawa and district, and acted as medical officer of the Quebec Tercentenary Celebrations in 1908. From 1899 to 1901 he served with the Canadian contingent in the South African War, gaining the Queen's medal with four clasps; he also held the Canadian long service decoration. He was gazetted lieutenant-colonel on July 27th, 1904.

CAPTAIN ALLAN MACKENZIE CLEGHORN, C.A.M.C., of Brantford, Ontario, died of pneumonia at Bramshott military hospital, England, March 21st. Captain Cleghorn, who was attached as medical officer to the 44th Battalion, C.E.F., left Canada for England last December. He was born in London, Ontario, in 1872, was educated in Toronto, and graduated from Trinity Medical College in 1892. Later he did post-graduate work at Edinburgh University. Captain Cleghorn practised at Cambridge, Massachusetts for some time, and was also on the staff of the Harvard Medical School. He leaves a widow and two children.

DR. ALFRED BOULTBEE, of Toronto, died March 16th, in the forty-seventh year of his age. Dr. Boulton was born in Madras, India, the son of the late William Boulton, a well-known civil engineer who constructed some of the large railways in India. He has resided in Toronto since he was seven years old and was educated at Upper Canada College and the University of Toronto, where he obtained his medical degree in 1891. He practised for a number of years in Toronto, but retired some time ago.

DR. THOMAS W. SPARROW, of Toronto, died March 17th, in the eighty-third year of his age. Born near Berlin, Ontario, the son of the late Thomas Sparrow, one time city treasurer of Galt and clerk of the Division Court, Dr. Sparrow was educated at the Rockwood Academy, Victoria College, Cobourg, and the Physio-Medical College of Cincinnati, Ohio, where he became professor of chemistry. After practising for a time in the United States, he returned to Canada in 1878, and took up practice in Toronto. He retired six years ago.

DR. W. E. DINGMAN, of Listowel, Ontario, died March 6th. Dr. Dingman was a graduate of Queen's University and had been in practice at Listowel for many years.

DR. R. B. CLARK died of pneumonia at Washington, D.C., on February 9th. Dr. Clark was born at Adolphustown, Ontario, in 1841. He was in practice for some years at Napanee, Ontario, and latterly had practised at San Diego, California.

DR. HAAKON B. CHRISTIANSEN, of New Westminster, British Columbia, was drowned at Venice, California, on February 27th, while attempting to rescue his sister, Mrs. R. Tofft, of Vancouver. About two years ago Dr. Christiansen came to New Westminster from China. He practised there until a few months ago when he went to Denmark to visit his father. He was returning to New Westminster when his death occurred in California. He was about thirty-six years of age.

DR. BENJAMIN F. CAMPBELL, of Brookline, Massachusetts, died March 13th. Dr. Campbell was born in Halifax in 1834, and graduated from the Harvard Medical School in 1857. He practised for some years in Boston.

DR. HARRY ROBERT FRANK, of Brantford, Ontario, died December 31st, in the forty-fifth year of his age. Dr. Frank graduated from Trinity University in 1894.

DR. CHARLES WRIGHT, of Toronto, died in the seventy-seventh year of his age.

DR. LACHLAN MCALISTER, of Nottawasaga, Ontario, died March 12th, at the age of seventy-three years. Dr. McAlister

obtained his medical degree in 1867. He first went into practice at Lindsay, but soon returned to Nottawasaga where he continued to practise until a few weeks before his death.

DR. GEORGE W. BOGGS, of Vancouver, died February 28th, in the seventy-eighth year of his age. A Nova-Scotian by birth, Dr. Boggs received his early training at Horton Academy, Wolfville, and afterwards entered McGill University. He graduated in medicine in 1866. In 1891, Dr. Boggs went into practice at New Westminster, British Columbia, and some years later removed to Vancouver. He served for two years as physician on SS. *Empress of Japan*.

DR. ARCHER IRWIN died in the Queen's Hospital, Honolulu, February 22nd. Dr. Irwin had practised in the Hawaiian Islands for about twenty years. He was born at Shelburne, Nova Scotia, and was in the fiftieth year of his age.

DR. JAMES I. GLENDENNING, of Streetsville, Ontario, died suddenly December 2nd, in the sixty-first year of his age. Dr. Glendenning graduated from Victoria University in 1880.

DR. GAIUS T. SMITH, of Moncton, New Brunswick, died of pneumonia, March 19th, in the fifty-sixth year of his age. Born at Lower Coverdale, Albert County, in 1861, and educated at the University of Mount Allison, Dr. Smith graduated with honours from Edinburgh University in 1887. On his return to Canada, Dr. Smith went into general practice at Moncton, where he built up an extensive practice. About ten years ago he began to specialize in diseases of the eye, ear, nose and throat. He was well known and highly esteemed in Moncton, and his death after a brief illness is much regretted.

DR. K. M. GUNSOLUS, of Detroit, died March 25th. Dr. Gunsolus was born at Guelph in 1850 and was a graduate of Queen's University. He went into practice at Detroit in 1891.

DR. ROBERT WALLACE BRUCE SMITH, of Toronto, died March 28th. Born at Mitchell, Ontario, on May 11th, 1857, and educated at the Newmarket and Newburg High Schools, Dr. Bruce Smith graduated from Victoria University, Toronto, in 1879. He went into practice at Seaforth, Ontario, and in 1894 was appointed

to the staff of the Hamilton Hospital for the Insane, and became superintendent of the Orchard Convalescent House. In 1900 he went to Brockville as assistant medical superintendent of the Hospital for the Insane, and four years later was appointed inspector of asylums, hospitals, and charities for the province of Ontario.

Dr. Bruce Smith was well known throughout the country as a specialist in neurology and psychiatry, and his genial nature made him many friends, his personal qualities commanding both respect and admiration. He was an earnest student and a frequent contributor to the medical literature. In 1894, Dr. Bruce Smith was appointed vice-president of the Canadian Medical Association; in 1905, vice-president of the Charities and Corrections Association; in 1909, a director of the Canadian Purity Association. He was a delegate to the ninth and other international medical conventions, and in 1908 made an official tour of the large hospitals of the United Kingdom as representative of the Ontario Government. He is survived by his widow and three daughters.

DR. WILLOUGHBY BRENT, of Mahone Bay, Nova Scotia, died of heart failure, March 16th. He was a son of the late Canon Brent, of Newcastle, Ontario, and brother of Bishop Brent, of the Philippine Islands. He had been in practice at Mahone Bay for nearly nineteen years.

DR. JOHN MCBAIN, of Montreal, died March 27th, in the sixty-sixth year of his age. Dr. McBain was born at Glengarry, Ontario. He graduated from McGill University in 1874 and practised for a time at Martintown, Ontario.

News

MARITIME PROVINCES

DR. GOLDWIN J. NUGENT, of Chipman, and Dr. Victor Davidson, of Newcastle Bridge, have been appointed coroners by the provincial government of New Brunswick.

IN the forty-eighth annual report of the Nova Scotia Hospital for the Insane it is stated that the number of applications for ad-

mission to that hospital during the past year was 272; 252 patients were admitted to the institution, 9 were referred to county asylums and 11 were given treatment in their own homes pending admission to the hospital. The number of patients discharged during the year was 242, of whom 103 were considered cured and 37 were improved. At the end of the year 511 patients were undergoing treatment in the hospital, namely, 253 men and 258 women. Since the institution was first opened fifty-seven years ago, 6,168 admissions have been made, 1,074 being re-admissions. Out of this number 2,617 recovered, 1,019 showed improvement, 1,430 died, and 4 were found to be sane. Thus the percentage of recoveries was 42.2. The number of admissions has steadily increased of late years, as witness the following figures: 1859, 70 admissions; 1870, 70; 1880, 89; 1890, 94; 1899-1900, 127; 1910-11, 155; 1911-12, 181; 1912-13, 184; 1913-14, 211; 1914-15, 252. In considering the probable causes of the mental condition of the patients admitted to the hospital during the year 1914-15, the following factors are given: heredity in 37 cases; previous attacks in 41 cases; business or domestic worries in 45 cases; ill health in 21 cases; overwork in 10 cases; intemperance in 7 cases. The total expenditure for the year under consideration amounted to \$137,994.58.

THE annual report of the Children's Hospital at Halifax states that during the past year 175 cases were treated in the hospital; ten deaths occurred.

THE isolation hospital at St. John, New Brunswick, was completely destroyed by fire on the morning of March 27th. No patients were in the building at the time.

ONTARIO

DR. HOWARD BLACK has been appointed assistant superintendent of the Toronto General Hospital. Dr. C. K. Clark has resigned to take up post-graduate work.

DR. ALLAN B. RUTHERFORD has been appointed acting medical officer of health at Owen Sound during the absence of Captain Herbert G. Murray, who is on active service.

It is probable that the old General Hospital at Toronto will be converted into a base hospital for returned soldiers.

AN isolation hospital is to be opened at Lindsay. The Dominion Government has contributed \$1,000 towards the purchase of a suitable building. Treatment will be given to both military and civil patients.

A DEPUTATION representing the Trades and Labour Congress of Canada and the Ontario Labour Educational Association waited on the Ontario Government on Thursday, March 17th. The matters dealt with by the deputation included a request that the Workmen's Compensation Act be so amended that hospitals would receive payment for first aid services out of the funds provided for under the Act.

THE following figures are taken from the annual report of the Chatham General Hospital for the year ending September 30th, 1915: admissions to hospital, 655; births, 65; deaths, 35; discharges, 680; hospital days, 12,923.

DR. WEIR, of Auburn, has been appointed medical officer of health at Blyth in succession to Dr. Allison, resigned.

DR. FREDERICK ADAMS has been appointed acting medical officer of health at Toronto during the absence of Dr. C. J. Hastings, who has been obliged to give up his duties for a time, and to take a well-earned rest.

AN outbreak of smallpox is reported from Amherstburg. A general order for vaccination has been given by Dr. McNally, the provincial medical health officer.

QUEBEC

THE enquiry into the recent epidemic of typhoid at Hull has resulted in an order from the Provincial Board of Health for the installation of a mechanical filtration plant.

MANITOBA

It is proposed to enlarge the Grace Hospital at Winnipeg.

A DELEGATION from the Manitoba Medical Association recently waited on the provincial government with the request that

an inspector of hospitals and public charities be appointed for the province. "Sympathetic consideration" of the matter was promised. The members of the delegation were: Dr. J. McKenty, president of the Manitoba Medical Association, Dr. J. S. Poole, Dr. A. T. Mathers, and Dr. T. Glen Hamilton, M.P.P.

DURING the eleven months covered by the report submitted at the annual meeting of the Corporation of the Winnipeg General Hospital, 9,234 patients received treatment in the hospital. The outdoor patients numbered 7,281. The daily cost of maintenance was \$2.04 per patient. The number of patients treated in the private and semi-private wards has increased appreciably since the reduction was made in the charges.

ALBERTA

ACCORDING to the figures given by Dr. Mahood, the medical officer of health, the death rate in Calgary during the month of February was 10.9 per 1,000. The population of the city is estimated at 70,000; the number of births was 173, and the deaths 90, 26 being of infants under one year of age. With the exception of whooping cough, the number of cases of infectious and contagious disease was less than in the preceding month.

A LARGE number of cases of typhoid fever occurred in Lethbridge during March.

Two hundred and ninety-six patients were admitted to the Red Deer Memorial Hospital during the year 1915; 272 patients were discharged, and 18 deaths occurred. The number of hospital days was 4,863 and the daily cost of maintenance averaged \$2.13 per patient. The increase in the cost of maintenance, which in 1914 was \$1.93, is due partly to a reduction of about 20 per cent. in the number of days of treatment given, which again is the result of the enlistment of many men in the district and the consequent removal of a number of families.

THE following is the list of communicable diseases reported in Edmonton during the month of February: measles, 84 cases; chicken-pox, 40 cases; whooping cough, 8 cases; erysipelas, 4 cases; diphtheria, 2 cases; tuberculosis, 2 cases; German measles, 1 case. One hundred and forty-one births, 70 marriages, and 52 deaths were reported during the month.

SASKATCHEWAN

DR. STUART REID, of Prince Albert, has been appointed government physician at the Indian Reserve at Mistawasis.

BRITISH COLUMBIA

THE plans are to be prepared for the reconstruction of the Kootenay Lake General Hospital, Nelson. It is the intention to erect in front of and adjoining the present structure, a building which will contain the administrative office and women's wards. When this is completed, the west wing of the old building will be pulled down and a new building erected on the present foundations. Later the same thing will be done with the east wing. Thus the whole building will be reconstructed without preventing the continuance of hospital work. During the past year 531 patients were treated in the hospital and the number of days' treatment given was 9,347.

THE annual report of the Provincial Board of Health contains a recommendation that the Land Act be amended so that no township or subdivision shall be "acceptable to land registry unless approved by the provincial board of health." Such an amendment, if enforced, would prevent the establishment of townsites in insanitary locations with the resultant problems in connexion with the water supply and disposal of sewage. The report suggests the establishment of a central clearing house for all cases of tuberculosis, from which advanced cases should be sent to special hospitals and the incipient to sanitariums. It is recommended also that the Tranquille Sanitarium be enlarged to accommodate 300 patients, and that beds be reserved for the treatment of advanced cases of the diseases in the civic hospitals. As to the general health situation during the past year, there was an epidemic of mild smallpox in the southern and eastern parts of the province in the early part of 1915, some 350 cases being reported; none of these patients had previously been vaccinated. Little improvement was manifested during the year in the number of cases of typhoid, although medical officers of health had been provided with prophylactic vaccine. The carelessness of railway workers and members of construction camps in regard to sewage and the selection of drinking water is no doubt partly responsible for the condition.

THE date of the annual meeting of the Royal Jubilee Hospital, Kenora, has been changed from May 31st to December 31st, so that the last annual report covers seven months only. During this time, the number of admissions to the hospital was 183; 167 patients were discharged, 9 deaths occurred, and 15 births took place; 3,596 days' treatment was given. In accordance with the by-law which was passed recently, the hospital will receive in future an annual grant of \$2,000 from the town of Kenora.

ARMY MEDICAL SERVICES

THE following promotions in the Canadian Army Medical Corps are announced. To be Colonel: Lieutenant-Colonel G. B. E. Beauchamp, O.C. No. 6 General Hospital (Laval). To be Lieutenant-Colonel: Majors Henry Gordon, Winnipeg, A. MacKenzie Forbes and G. Bourgeois, Montreal. To be temporary Majors: Captains J. C. Fyshe and W. A. Burgess. To be honorary Majors: Captains C. J. Stewart and G. Wallace, who are in charge of the medical and surgical work at the Queen's Canadian Hospital, Beechborough Park. To be temporary Captains: Lieutenants A. M. Yeates, A. R. Robertson, L. F. Jones, J. W. Hunt, F. Perras, and J. W. Wickware.

THE following lieutenants in the Canadian Army Medical Corps have been gazetted temporary lieutenants in the Royal Army Medical Corps. R. P. Smith, W. M. McLaren, M. C. Bridgeman, A. McNally, A. E. McCulloch, G. J. Hanley, C. B. Cameron, W. G. G. Coulter, W. Dixon, J. E. Bromley, C. G. Merrick, G. H. Kearney, P. W. Tuller, J. E. Carmichael, A. E. Whitmore, R. C. Robinson, W. S. T. Connell, and D. M. Baillie.

CAPTAIN MALLOCH, C.A.M.C., of Hamilton, has been appointed commanding officer of the Daughters of the Empire Canadian Red Cross Hospital for officers which has been established at No. 1, Hyde Park Place, London. Accommodation for twenty-five patients is provided.

CAPTAIN A. R. B. DUCK, C.A.M.C., is now paymaster at the Canadian Convalescent Hospital at Epsom. Honorary Captain and Quartermaster C. E. Arlidge, C.A.M.C., has been transferred from Moore Barracks Hospital to the Canadian Red Cross Convalescent Hospital, No. 2, at Buxton.

THE following physicians have joined the Royal Army Medical Corps. Dr. John A. Blezard, of Warkworth, Ontario; Dr. J. G. Gun, of Ailsa Craig, Ontario; Dr. R. B. McKenna, of Hymers, Ontario; Dr. P. D. Stewart, of Saskatoon; Dr. J. G. Lee, of Toronto; and Dr. A. C. Burt, of Simcoe, Ontario.

LIEUTENANT-COLONEL MACPHERSON, C.A.M.C., has been appointed commanding officer of the Ontario Military Hospital at Orpington, Kent, with the rank of Colonel. The appointment was offered to Colonel A. E. Ross, C.M.G., C.A.M.C., who, however, preferred to remain at the front. Colonel Macpherson was previously in command of the Woodcote Park Convalescent Hospital at Epsom.

MAJOR S. NIXON DAVIS, C.A.M.C., of Welland, Ontario, has been appointed second in command of the 114th Haldimand Battalion. Major Davis was connected with the 37th Haldimand Regiment for many years.

THE following have been appointed medical officers of overseas battalions: Captain J. F. McQuay, of Toronto, of the 100th Battalion Winnipeg Grenadiers; Captain E. A. Gray, of Caron, Saskatchewan, of the 128th Battalion; Captain Coles, of Regina, of the 195th Battalion; Captain G. A. Mackenzie, of Fort Rouge, Manitoba, of the 179th Battalion; Lieutenant Norman Gilmour, of Brockville, of the 16th Royal Scots now serving in France; Captain T. C. Campbell, of Princeton, British Columbia, of the 67th Battalion, Western Scots; Captain A. F. Rykert, of Toronto, of the 176th Battalion; Captain A. Arthur, of Winnipeg, acting medical officer of the 221st Battalion.

DR. J. A. M. HEMMEON, of Seattle, has joined B Section of No. 1 Field Ambulance, C.E.F., which recently left Victoria for the front.

CAPTAIN CHARLES G. MAIN, C.A.M.C., of St. Stephen, New Brunswick, recently left to join the staff of No. 3 General Hospital (McGill) in France.

DR. J. ARTHUR MCCOURT, resident physician of the General Hospital, St. John, New Brunswick, and Dr. K. A. McCuish, of Glace Bay, Nova Scotia, have been appointed to the staff of No.

9 Stationary Hospital, the unit contributed by the St. Francis Xavier University, Antigonish.

LIEUTENANT-COLONEL HENRY GORDON, of Winnipeg, has been appointed officer in command of No. 12 Ambulance Corps.

THE University Field Ambulance Corps, the unit recently offered by the four Western universities of Manitoba, Saskatchewan, Alberta, and British Columbia, has been accepted and is in process of organization. It will be under the command of Lieutenant-Colonel John McQueen, C.A.M.C., who has been in command of No. 3 Field Ambulance at the front. The corps will comprise 160 men and 9 officers and will be trained at Winnipeg.

COLONEL HANFORD MCKEE, of Montreal, has been appointed second-in-command at the Canadian Eye and Ear Hospital at Folkestone. Some months ago Colonel McKee was invalided to England from the Dardanelles, where he was in command of No. 3 Canadian Stational Hospital, then stationed on the Island of Lemnos.

DR. ELLA SCARLETT SYNGE, of Vancouver, who recently returned to England from Serbia, has been appointed to the staff of the Joyce Hospital, Kent.

AN offer of a field hospital for overseas service has been made to the military authorities by Western University.

DR. L. W. KERGIN, of Prince Rupert, British Columbia, and Dr. Charles M. Pratt, of St. John, New Brunswick, have left for the front.

CASUALTIES

Wounded

CAPTAIN C. E. COOPER COLE, C.A.M.C., of Toronto. (Medical officer of P.P.C.L.I., and formerly attached to No. 2, General Hospital, C.E.F.)

Died

CAPTAIN ALLEN M. CLEGHORN, C.A.M.C., of Brantford, Ontario. (44th Battalion.)

CORRESPONDENCE FROM THE SEAT OF WAR

THE following extracts are taken from two letters received from an officer in No. 1, Canadian Casualty Clearing Station in France:

January 15th, 1916, "On December 26th, I was moved up here, which is still twenty odd miles from the trenches. We get no wounded except from the accidents occurring among the troops which are in reserve round here. We look after all the medical illnesses, and surgical, among them and have had a fair amount of operating on such things as appendicitis, hernia, boils, etc. This unit is being moved up close to the front in a very few days, and we shall there have plenty of wounds to look after. We shall be in a town just five miles behind the trenches, and can get the wounded down in ambulances within a few hours. Abdominal cases are hurried back and reach hospital in anywhere from $1\frac{1}{2}$ to 5 or 6 hours, depending on how quickly they can be got out of the trench. They are the chief thing in surgery that we never saw down at the base, and it is only recently that the wounds of the abdomen have been operated on. I hope we can save some of the poor fellows.

"We are to be quartered in a part of an Insane Asylum. It is an annex just outside the main building and can hold four hundred and fifty easily. A big three storey brick building with big windows, very sunny and attractive, and close beside the big aerodrome on which we can look out and see the aeroplanes alight and mount. Our rooms and mess are some three hundred yards away from the hospital, and the walk is a bit muddy at this time of year. Our quarters in this place are in an old fort which was of late years used as a military prison. I go from prison to asylum. Pretty business, is it not!

"The town here is a rather nice old French town, through which runs the river Lys, and also the Béthune-La Bassée canal. The river is small, about the size of the canal, and where they cross each other the river is led deep under the canal through an artificial tunnel and comes up on the other side. It is much used by barges, in these days hospital barges especially, which hold some thirty-five lying cases. The worst ones are usually sent down to Calais by barge as the transport is so smooth.

"It is extraordinary what the English have done in this country of North France. It is simply full of troops, supplies, thousands of motor lorries and motor ambulances, horse transports, waggons, and all the paraphernalia of modern war. The French people

remaining, mostly old men, women and children, all open stores to sell things to the English, and they are making small fortunes. The wealth of England and her energy and power of organization shown in building up in a year such an enormous army, and occupying a country across the sea over which she has to transport everything she needs for the army—all this is really stupendous; and I admire the English as an efficient nation more than I ever did."

February 6th, 1916, "As for myself I had the good luck to be sent up to this unit on December 26th, as surgical specialist. It was then at — and the work was not hard, as we were too far from the front. For the past three weeks, however, we have been up close, in a fine new building, at —, and the work, though not strenuous, yet is of the real sort, the sort that makes one feel one is of use, the sort we had in mind when we volunteered. The ambulances get in the wounded in anything from three to ten hours. In this comparatively quiet time, the wounded average not quite half the total admissions, the others being sick. In my 'senior' ward, I have to-day seven wounds of the lung. They often come in in bad shock, almost, or indeed quite, pulseless, with blood pressures as low as 65 systolic and 40 odd diastolic; and a chest full of blood, or air, or both. But with morphia and rest, its wonderful how they pull up. To-day I had a man with his adductors and the femoral artery shot clean out, a gap of two inches in his femoral, and pulseless to the feel, though the auscultatory blood pressure reading gave a systolic of 67, and diastolic of 45. I didn't touch him for six hours, except for salines, and then getting a pressure of 80-55, I opened up under local and found as above described, the end of the femoral with a clot in it, and tied it. I think he'll do. Our blood transfusions at the base were encouraging, and I am ready to use it here,—almost did in this case. It's exciting, and the whole business is full of joy at seeing them pull through, or of grief at seeing gas gangrene defeat one's best efforts.

"The Germans were doing a lot of strafing along our line yesterday; our heavies were going, too, at a great rate in the afternoon,—we hear them very plainly from here,—the result was that we got in two hundred in the last twenty-four hours, and most of them between 5 p.m. and midnight. Probably two-thirds this time were wounded. But many were slight affairs. I did my first real 'abdominal' last night, though we had had several before where the gut was not injured. This had three holes in the transverse colon and two in the jejunum. He's doing well. I transfused the case I spoke of earlier in the letter the next day, with blood from a volunteer. But although it made him fit for amputation,

he died from gas gangrene—septicæmic—twenty-four hours later. Gas gangrene is frightfully common now, far more so than in the cases we saw at the base. The surgery up here is very different in many respects from that of the base. I never saw shock and hæmorrhage, the real thing so to speak, before. Such cases either never see the base, or are in fair shape when they do.

Medical Societies

ONTARIO MEDICAL ASSOCIATION

ARRANGEMENTS for what will probably be the most notable meeting in the history of the Ontario Medical Association—May 30th to June 2nd, 1916—are now well under way. Crucial interest centres round numerous matters of far-reaching importance to the profession which will come up for discussion. Among these one may refer to the Workmen's Compensation Bill. The Committee dealing with this question have the work well in hand, and there is every prospect that, with the strong backing of the profession as a whole, a satisfactory adjustment should be reached, if only the matter is placed clearly and forcibly before the government.

It is scarcely necessary to emphasize further the importance of the questions now being dealt with before the Commission on Medical Education, which will include every phase of our professional activity. One may safely say there has been no juncture so critical as the present in the history of the profession since the organization of the College of Physicians and Surgeons in 1865.

In order to bring the influence of the profession throughout the province to bear as fully as possible on these and other matters, a vigorous effort has been made to organize County Medical Societies, linking them up with the Ontario Medical Association. The efforts of the Committee on the Organization of County Societies have met with a fair degree of success, although a remarkable apathy is evident on the part of the profession in some sections of the province in regard to matters of such urgent professional and public interest. However, some thirty-five local societies are now in existence in the province, and fifteen more will require to be formed to complete the provisional organization. It is earnestly hoped that the profession in these districts will take action before the meeting which takes place at the end of May.

We are given to understand that the report of the Commission on Medical Education will not be ready to be dealt with by the legislature during the present session, thus an opportunity is given for

further expression of the views of the profession at the forthcoming meeting of the Association.

The programme of the meeting, announced in the March issue of the JOURNAL, so far as arranged, is one of much scientific interest and practical importance to members of the profession. The Address in Medicine will be delivered by Dr. E. P. Joslin, of Boston, on the "Treatment of diabetes"; the Address in Surgery by Dean deWit Lewis, of Chicago; and the Address in Gynæcology by Dr. J. F. Percy, of Galesbury, Illinois. Arrangements have been made for a symposium on "The role of the nose, mouth, throat and accessory sinuses in relation to systemic disease". Dr. W. A. Price, D.D.S., of Cleveland, will deal with mouth infections, illustrated by a remarkable kineomatographic demonstration. "The arthritides" will be taken by Dr. Joel Goldthwait, of Boston, and "The nose, throat and accessory sinuses", by Dr. D. J. Gibb Wishart, Toronto.

Professor Blackader, of Montreal, will deal with "Drugs and medicinal agents considered from the professional, national and economic standpoints," than which no more timely subject could be brought before the notice of the profession. Dr. Justus Matthews, of the Mayo Clinic, will give a paper on "Tonsillectomy with its general results". Dr. Solomon Solis-Cohen, of Philadelphia, will discuss "The treatment of pneumonia". Many papers on topics of special interest are being contributed by prominent members of the Association, such as "Blood transfusion, its indications, technique, etc."

Perhaps one of the most interesting features of the meeting will be the session being arranged to deal with the "Returned soldiers' problem", from the medical, military, vocational, and economic points of view. The session will be under the distinguished patronage of His Honour, the Lieutenant-Governor of Ontario. Professor Stephen Leacock, professor of political economy in McGill University, will deliver an address on "The economic problem presented by the final disposition and treatment of returned soldiers"; and papers will be read dealing with "Neuroses among soldiers", "The effects of poisonous gasses," "Results of typhoid inoculation," "Treatment of cerebro-spinal meningitis," "Vocation reëducation and adjustment," "Treatment of the blind after the war," etc. At this session it is expected that there will be representatives of the various military convalescent hospitals throughout the Dominion, and it is hoped to formulate general plans for uniformity of policy and procedure in these institutions. In arranging for this special session the association is assured of the

hearty coöperation of Lieutenant-Colonel Marlow, A.D.M.S., and other officers of the Canadian Army Medical Corps in this district, as well as the Military Hospitals' Commission.

Although large numbers of the medical profession of the province are at present engaged in military service at home or abroad, yet the officers of the Ontario Medical Association appeal for the loyal support of the profession as a whole to make this one of the largest and most enthusiastic meetings in its history, in order to deal in the most vigorous way with the important questions coming up for consideration. If the medical profession of the province is to do its full duty during the war, if it is going to show itself capable of protecting its own interests—which are at the same time the interests of the public—and if it is to be able to do its duty in the processes of national reconstruction after the war, it must organize. Surely the last two years have ineffaceably burned this lesson into our inmost beings!

An invitation has been extended to the Canadian Medical Association to hold its executive session in conjunction with the annual meeting, and it is hoped in this way to have a larger representation from other provinces than has been the custom in recent years.

The medical officers of health will hold their annual convention the day and a half preceding the meeting of the Ontario Medical Association.

Members of the profession in the province who desire to present papers or to take part in discussions are invited to communicate with Dr. C. L. Starr, Chairman of the Committee on Papers and Business, 224 Bloor Street West, Toronto.

MANITOBA MEDICAL ASSOCIATION

THE annual meeting of the Manitoba Medical Association, and of the Winnipeg Medical Society took place at Winnipeg on February 15th and 16th, last. The morning of February 15th, was devoted to clinics at the Winnipeg General Hospital, when cases were presented by Dr. H. P. H. Galloway, Dr. B. J. Brandon, Dr. N. J. Maclean, Dr. J. E. Lehmann, Dr. G. Hiebert, and Dr. E. W. Montgomery. An interesting collection of *x-ray* plates was on view in the *x-ray* room, and in the pathological laboratory some instructive demonstrations were given. At the St. Boniface Hospital, Dr. James McKenty performed a gastro-enterostomy and a herniotomy. In the afternoon, Dr. Boyd, professor of pathology in the University of Manitoba, spoke on the "Clinical importance of examination of cerebro-spinal fluid" and gave a demonstration of

the methods employed; he also exhibited a series of pathological specimens and slides. In the evening, a clinic was held at the Winnipeg General Hospital, Dr. Lehmann presenting cases of cardiospasm, cancer of breast and tonsil, and open treatment of burns; Dr. Halpenny an unusual case of appendicitis, and a case of enteroptosis. A series of skin cases was presented by Dr. Hugh Mackay; Dr. Maclean showed a case of enteroptosis and an x-ray plate of misplaced kidney. Cases of Perthe's disease and deformity of nose treated by bone transplantation were exhibited by Dr. H. P. H. Galloway, and a case of hæmophilia by Dr. Ross Mitchell.

On Wednesday, February 16th, Dr. Raymond Brown exhibited the following cases at the Children's Hospital: cataract, strabismus, and tonsilectomy (five cases). This was followed by a medical clinic, at which Drs. Rorke, Richardson, and Tees presented cases. In the afternoon, the business meeting of the Manitoba Medical Association took place at the society's rooms. The presidential address on "The standardization of smaller hospitals in Manitoba" was then delivered by Dr. J. S. Poole, of Neepawa. The status of the small hospital is a question of great importance in the province of Manitoba, and a committee consisting of the president, Dr. James McKenty, Dr. A. T. Mathers, and Dr. T. Glen Hamilton, was appointed to bring to the attention of the government the need of adequate inspection by a medical man of all hospitals, charitable institutions and foster homes as well as asylums and goals throughout the province. This committee has approached the government already and has received a sympathetic hearing. The afternoon session closed with a lantern slide demonstration of x-ray plates by Dr. J. C. MacMillan.

In the evening a clinical meeting was held at the St. Boniface Hospital, when the following cases were presented: Dr. Lachance, tropho neurosis; fistula following appendicitis. Dr. James McKenty, gastrectomy for carcinoma of stomach; laminectomy; genito-urinary tuberculosis in male. Dr. C. A. Mackenzie, head injury followed by paralysis, treated by trephining. Dr. F. D. McKenty, eye cases. Dr. D. F. McIntyre, lumbar abscess treated with bismuth paste.

The names of the officers elected for the forthcoming year were published in the March number of the JOURNAL.

MONTREAL MEDICO-CHIRURGICAL SOCIETY

THE seventh regular meeting of the society was held Friday evening, January 7th, 1916, Dr. W. S. Morrow in the chair.

LIVING CASE: *Myositis ossificans traumatica*, by Dr. J. Alexander Hutchison.

This case is one of a comparatively rare condition; Dr. Elder reported a case in his service last winter and there is now one in the Royal Victoria Hospital. In all the years I have been doing hospital work I have never seen a case though many years ago we had one which was suspiciously like the condition, but it was before radiography, and recognition was not definite. This man is forty-eight years of age, was admitted to the public service of the Montreal General Hospital on October 21st, 1915, complaining of having been kicked by a horse in the middle of the thigh six weeks before. He did not get medical advice as he complained of nothing beyond acute pain for the first few days. He then began to get lame, noticed the leg stiff and applied for relief. On examining the anterior portion of the thigh there was a large uniform swelling, very hard and firm, giving one the impression of sarcoma. The knee was extremely stiff and could hardly be flexed. Radiography established the diagnosis, showing a classic condition. Under ether anaesthesia, I removed a large amount of broken-down bone, some hard and well developed, some soft and intermixed with blood clot. The area involved was about eight inches and extended from the anterior portion of the thigh, including the external aspect, and slightly to the inner aspect. I chiselled the mass off, and it was noticed that the periosteum was intact at every place but one. I was not absolutely sure whether there was any bony connexion with the true bone of the femur and the tumour bone, but I chiseled the piece out feeling that that was a wise thing to do. He made a good recovery and was discharged to the outdoor department for passive treatment, which he did not follow but returned to work. I sent for him lately and found a slight recurrence, demonstrated by the x-rays, down towards the lower part of the area originally affected, but whether the present limitation of the knee is due to the new growth or to the first condition and his lack of after treatment it is hard to say. The particles of bone which I show are characteristic. At the operation the muscle was found more or less destroyed with blood clot here and there. The bone was very hard and a mallet had to be used. In most cases it is so soft that it can be scraped out with a curette. The classical cause for these growths is a kick from a horse and the classical sequel is recurrence, which however does not need to be operated on again but requires massage, etc., to be carried out.

PATHOLOGICAL SPECIMENS: Series by Dr. G. E. Armstrong.

1. Fibro-myoma. The chief interest in this specimen is that

it developed in the flat muscles of the abdomen in a lady aged thirty-seven. These tumours are somewhat rare and are interesting in the matter of diagnosis. The case gave rise to all kinds of diagnoses from malignancy of the intestine up to appendicæcal abscess. I have only seen a few of these tumours, but once seen they are not difficult to diagnose. There are no large veins, no tenderness; they are movable with the abdominal wall, shell out quite easily without opening the peritoneum and heal up with no danger of recurrence.

2. Duodenal ulcer. We hear a great deal of this condition but outside of the operating surgeons, and perhaps a few pathologists, we do not often see it. The ulcer was situated on the upper and anterior wall of the duodenum near the pylorus. I have excised these ulcers when they could be removed without increasing danger to the patient. Perhaps they do about as well when they are not removed, but this was very close to the pylorus, almost in it, and I thought it would be just as well to remove it when it could be done easily. In some of the cases after I have removed them I have done a Heinecke-Mickulicz pyloroplasty; in other cases, as in this, I closed the opening and did a gastro-duodenostomy afterwards. In gastric ulcers the question is rather different, and I think gastric ulcers when exposed by the surgeons for any reason, perforation, hæmorrhage or other cause, should be removed because they represent a condition which may lead to carcinoma and other troubles later on. A duodenal ulcer, however, rarely becomes malignant.

3. Ruptured kidney. Kidney removed seventy-two hours ago from a young man aged twenty-one, who had been kicked by a horse. The mark of the horse's foot was just over the lower ribs on the right side. When brought into hospital he was in bad shape with a temperature of 103° and pulse 132. The right side was very tender, the tenderness extending down to the right iliac fossa. Fixed dulness on percussion. The urine was very bloody and he had been passing blood ever since he had received the kick. It seemed pretty clear that he had a ruptured kidney requiring surgical attention, as it was seventy-two hours since it had occurred, the temperature 103° and the pulse 132. I went in and exposed the kidney and in the first place evacuated a considerable quantity of clotted blood. The kidney was seen to be completely divided across, held together by a mere trifle of tissue just at the posterior part. The bleeding was considerable. The lower half had the ureter attached to it and was still bleeding. I first got the ureter and delivered the lower half which dropped right off: the renal

artery had also been torn off. I was able to get a clamp down on to it and he lost no more blood after that. The interesting part is that when I divided the upper half of the kidney it was simply one extravasated mass, bruised and damaged to an extreme degree. When I split the lower half of the kidney it was perfectly normal. The rib had been driven in by the hoof of the horse and the kidney had been cut right in two by the lower border of the last rib, the upper pole had been compressed by the rib as well. I left the forcep on the renal artery. The pulse was rapid and he was extremely weak, notwithstanding he was getting transfusion all the time. He is now very well, temperature is normal, pulse good, and he is going on nicely.

4. This is an interesting specimen of a kidney containing ten or fifteen stones, one large one, the others smaller. The diagnosis was rather difficult. The man, aged fifty, was admitted to the hospital when his whole complaint was pain just below Poupart's ligament; nothing to be seen and nothing felt. We all thought this must be a case of nerves, there was nothing there, nothing in the pelvis and abdomen, no limitation of movement, no atrophy, waste of muscles, or anything to account for this pain. He persisted in his complaint, however, saying he had had this for six months and he certainly had no appearance of a neurotic. He said that on lying down he would be fairly comfortable, but on walking about the pain would appear. The only thing I could think of was some possible renal condition, where sometimes the symptoms may be reflected down. No tenderness over the kidney and he was a thin man and yet nothing could be felt. He never had had any pain in the kidney, never any reflected pain except in that one spot. He was x-rayed and these stones showed up in the picture. The kidney was found dilated, sacculated, and contained all these stones so that there was nothing left to do but remove it. His recovery was smooth and uneventful.

DISCUSSION: Dr. M. Lauterman: I was once asked to see a lady who was supposed to have a large gumma in the abdominal wall and which turned out to be a tumour such as Dr. Armstrong showed to-night. The kidney cases are most interesting, the ruptured kidney is by no means a common occurrence, and Dr. Armstrong is to be congratulated on having a living patient. In the case with the multiple calculi I should be surprised that a man could have such an extensively damaged kidney without any indication in the urine that would suggest the presence of these calculi. It seems to me that the recent developments and refinements in diagnostic methods, as applied to the urinary organs such as pyro-

graphy with the injection of either collargol or albargin, ureteral catheterization with the Burton-Holmes wax tipped catheter, or the testing of the functional activity of the kidney, would have easily demonstrated the mischief present.

Dr. G. E. Armstrong: As to the urine, in the case with stones that was one of the complicating things in the diagnosis, a stone having blocked the ureter the urine all came from the other kidney and was clear and contained no blood.

PATHOLOGICAL SPECIMENS: Series by Dr. H. Oertel.

1. Mediastinal tumour. Woman aged twenty-nine, entered under Dr. Martin's service November 22nd, died December 6th. Illness was of three months' duration; complaints of pain in back, head and neck, which obliged her to go to bed. Condition improved under rest but she developed sacral bed sores which, however, healed up though weakness continued. One week before admission she became short of breath and her voice hoarse; tenderness in epigastrium. On admission she was poorly nourished, emaciated, respiration rapid, dry cough; posterior cervical axillary epitrocleas and inguinal glands palpable, as also the thyroid; in the isthmus of the thyroid was a slight projection. There were signs of fluid in the left pleural cavity, with thickening of the pleura and signs of pulmonary stasis, the heart displaced to the right, the veins of the neck markedly engorged. She came to the pathological department a few weeks afterwards with a diagnosis of a thoracic tumour, probably a mediastinal growth. This diagnosis proved at autopsy to be correct. It is a typical growth in the anterior mediastinum which corresponds to the position of the anterior mediastinal glands. It has invaded the lung in a very characteristic fashion, very diffusely, and it infiltrates progressively the left lung, the right side being uninvolved. In addition, the pericardium shows similar diffuse infiltration almost like an inflammatory growth, its inner surface appearing white, shining, slightly nodular, particularly on the visceral side. The pericardial contents were bloody so much so that on opening the pericardium suspicion was entertained that the heart had been entered through an adherent pericardium. The only other condition which leads to such hæmorrhage is tuberculosis of the pericardium. The character of the tumour stamps it as a lympho-sarcoma. In a tumour occurring in this situation one has of course to think of thymus tumours which resemble the lympho-sarcomata. But this growth is distinctly nodular, uneven, while the thymus tumours are large and smooth. Then the extension is characteristic, by lymphatics massively invading the lung tissue and the pericardium.

The diagnosis between lympho-sarcoma and ordinary sarcoma is not always easy, particularly in advanced cases. The ordinary sarcomata have a great tendency to softening, the lympho-sarcomata less so, because the cells are contained in a delicate fibrillar network. Metastases in this case are very extensive in the liver, which is practically studded with firm, variously sized nodules. But there was no other metastases with the exception of the periportal, epigastric and pancreatic glands. It is difficult to state what determines this method and peculiar distribution.

Several slides were shown illustrating the invasion of the different organs by the growth.

DISCUSSION: Dr. M. Lauterman: In connexion with Dr. Oertel's case of lympho-sarcoma I would like to refer to a case of mine which came to autopsy at the Royal Victoria Hospital, January 1st, 1905, and which is the most extensive case of this sort I have ever seen. There were metastases in the cervical and thoracic glands, the myocardium, pericardium and endocardium, the superior vena cava was almost occluded by a growth reaching as far as the auricle; the spleen, liver, kidneys, suprarenal glands and the lobes of both lungs were involved. I first examined him on August 24th, 1904, when he had a small swelling at the left sterno-clavicular junction; there was visible pulsation giving the sensation of expansile pulsation, strongly suggesting aneurism. The condition was, however, soon recognized as a mediastinal neoplasm. X-ray treatment was very faithfully tried in this case and one of the gentlemen present at the autopsy expressed the opinion that it had possibly contributed to the general dissemination of the growth through the organs.

PAPER: Ocular manifestations of tuberculous meningitis, by Dr. F. T. Tooke.

DISCUSSION: Dr. H. Oertel: I have been interested in Dr. Tooke's paper, not only because it emphasizes the necessity of coöperation between ward and laboratory, but because his researches throw some light upon certain still disputed points in the histogenesis of tubercles. Some believe, as you know, that the lymphocytes are entirely derived from fixed cells, others that they are derived from emigrating cells. Dr. Tooke's study leaves no doubt that at least a considerable number of the lymphocytes in the tubercles are derived from emigrating cells.

Dr. Bramley-Moore: Marple gives as high as 100 per cent. of these manifestations in tubercular meningitis and after reading his article I have been on the look-out for these indications, but so far in the last three years I only remember seeing two cases. He says

you should watch very carefully even up to a few hours before death. In view of his rather remarkable statement of finding it in 100 per cent. of cases it is interesting to hear Dr. Tooke's paper on his large series of cases with such careful observations, upon which Dr. Tooke is to be congratulated.

Dr. F. T. Tooke: There is little to add to what has already been said. I would seem to occupy a position between two extremes of opinion; those who affirm that miliary tubercles are never manifest in the choroid and others who are satisfied that they are present in the vast majority of cases. I have tried to show by the manner in which this work has been undertaken that the middle course is the more reasonable one to follow. In following out my conclusions I was, perhaps, a little too modest in stating that the ophthalmologist could not afford much assistance to the clinician in regard to establishing and maintaining a diagnosis. It is true that the percentage of tubercles noted in our experience has been moderately low; but, on the other hand, a fairly large number of cases have shown a condition of peri-neural blurring which is of manifest importance in the establishment of a clinical diagnosis.

During the past summer I had the pleasure of meeting Dr. Marple, of New York, whom I have already quoted. With a mutual interest on the manifestation of the choroidal tubercle it was but natural that a very warm and interesting debate upon this subject should ensue, which I would like to add, was conducted in a mutually friendly manner. From our conversation I feel that the manner in which I have gone about my investigations, has presented fewer opportunities for fallacies. Dr. Marple has always used an electrical ophthalmoscope, an instrument which in my opinion presents many possibilities of error in the detection of very minute lesions even in the hands of expert observers. In the second place his investigations were made in infants only, where naturally the subject of investigation was of much more delicate structure, and where one would expect clinical manifestations to appear very much more rapidly than in a fully developed person with greater power of resistance. Again, a great deal of the work appears to have been the result of the house surgeon's observations entirely. Finally, there does not appear to have been any systematic pathological verification of such very positive results. This piece of work, which I have had in hand for the past number of years, has been conducted along pathological lines, which has added much interest to myself personally and possibly some value to the various conclusions which have been arrived at.

A great deal of the credit of my work is due to the department

of clinical medicine, and especially to Dr. Martin, who presented me with every facility for observing cases, and who afforded me my first opportunity of detecting a miliary tubercle of the choroid in an adult many years ago.

CASE REPORT: Eclampsia in early pregnancy, by Dr. D. J. Evans. (See March issue of the JOURNAL, p. 234).

DISCUSSION: Dr. M. Lauterman: This is a very interesting case report, but I never hear of cases in which the urinary findings are important without wondering why in this connexion albuminuria is always mentioned and none of the other findings are referred to. I am sure that there is a whole lot more to the question of eclampsia than the convulsions and albuminuria. We should realize that the elimination of solids and urea are much more important than even the albumin. Authorities have spent a great deal of time in estimating the chloride phenomenon but even this does not seem to cover the ground entirely. There are undoubtedly other toxic elements that are intimately connected with the process of metabolism, and are retained or eliminated in the urine, that we are not thoroughly familiar with. In this case why was it necessary to perform hysterectomy in order to empty the uterus rapidly? I have seen the uterus very rapidly emptied with the aid of the Bozzi dilator.

Dr. D. J. Evans: In connexion with the urine this patient voided it involuntarily, the first measured was the fourth day after the attack; about 800 or 900 cc. were voided at one time, and when she left it showed a normal quantity for the twenty-four hours. As to the urea findings I have studied this question for the whole of my obstetric career and for the past ten years I have given not the slightest weight to the urea content as I found from practical experience that its secretion bore very little connexion with the condition. With regard to albumin I do not regard it as a serious feature; in fact no one symptom in the condition is of much help. The urea estimation of the blood was worked out a great deal, but we got no help from that; blood clotting, the density of the blood, was tried and we found it much greater in eclampsia cases but could not attach much clinical significance to it. There is still further work to be done on the blood, however, as it seems to us that here more than in the urine something may be discovered.

THE eighth regular meeting of the Society was held Friday evening January 21st, 1916, Dr. F. A. L. Lockhart, president, in the chair.

PATHOLOGICAL SPECIMENS: Series by Dr. J. W. Scott, Intestinal Perforations.

1. All the information obtained was that the patient was taken suddenly ill the day previous to admission to hospital; he died in the ambulance on the way. At autopsy the abdominal cavity was bathed in a purulent material in which were recognized stomach contents. In the lesser curvature just on the anterior wall, in the pyloric region, was a perforating ulcer admitting a lead pencil. It was in the acute process as there was little thickening. In the posterior wall was a second ulcer involving only the mucosa and submucosa, showing it to be of earlier origin.

2. The history of this patient was that she had suffered from gripe for eighteen days before admission. Aged thirty-eight; complained of pain and vomiting at onset of her trouble. Seven days previous to admission vomited everything taken and there was absolute constipation for five days with faecal vomiting five days before admission. The temperature was 102°, respiration 28, pulse 24. The woman was very stout, the abdomen distended, rigid, tender; condition very bad. Immediately brought to operating room and surgeons found bowel markedly anæmic. On examination the ileum 8 ft. from the cæcum found perforated; treated surgically but patient died the following morning. At autopsy sutures of perforation were intact, no other perforations noted, but acute generalized peritonitis. When the bowels were opened we found typical lesions of the typhoid process involving the upper 10 ft. of the ileum, doubtless in the third week of the disease. The colon contained nothing but gas. As the splenic flexure was approached there was a marked contraction, a markedly thickened area, and on opening it was found to be a malignant process involving the lumen of the bowel leading to complete obstruction; no metastases in the regional nodes though the liver showed several malignant nodules. It was questionable whether the obstruction preceded the perforation of the ulcer or not.

3. The last specimen was from a patient who died shortly after admission to hospital; there was an incomplete history of suffering from kidney and bladder trouble for some time. Patient was very stout, aged about sixty-six. Mediastinum laden with fat and anchored in the left lower portion of the abdomen to the sigmoid. Adhesions separated with little force and a perforation was found involving the anterior surface of the sigmoid. Upon exercising some pressure no faecal material but a little purulent matter could be expressed. When the bowel was opened a row of diverticula were recognised on either side. They were not much

larger than a good sized pea and the one which perforated could be very beautifully seen. On examining the bladder there was tumefaction in the prostatic portion of the ureter, no suggestion of hypertrophy; a couple of stones were found in the region of the right side which probably explains the kidney trouble complained of. It is questionable whether these heavy tags of fat had any etiological interest in the production of these diverticula. They are usually produced by increased intra-intestinal pressure with a weak bowel wall, or are congenitally acquired.

DISCUSSION: Dr. G. E. Armstrong: These perforative ulcers are rather interesting and it is remarkable that an ulcer of that size could have occurred and the man still live, but sometimes I have seen them much larger. A fifty cent piece would just fit it, and it did not appear until the acute onset of symptoms. It is very clear that these occur by forming adhesions to some adjoining tissue. They are generally adherent to the lobe of the liver; one in particular I remember with symptoms of acute perforative ulcer which after exposing the stomach showed a very small perforation, but when I separated this from the liver I found a perforation about three inches long. In repairing these you must cut off this, which is sometimes several inches thick, and come down to the normal walls of the stomach when you can bring it together and repair with safety.

CASE REPORT: Two cases illustrating the effects of infection on the thyroid gland, by Dr. W. F. Hamilton.

In the first case the most outspoken manifestation of the condition was tachycardia, or a degree of tachycardia which is very unusual following upon an ordinary attack of typhoid fever. The patient was a woman of thirty-four who was taken ill with typhoid fever while nursing her six months' old child. She was admitted to the hospital on the twelfth day of the disease and ran the course of a mild typhoid fever attack with a pulse rarely above 100 to 110. There were no complications. She gave no evidence of cardiac weakness, with nothing whatever to attract attention to the circulatory system. Before the patient got out of bed, some ten or fifteen days after defervescence, the nurse noticed that the patient was the subject of a rather rapid heart, 110 to 130 even when not subjected to any unusual exertion. We cast about for some explanation for this exceptional phenomena. It could not be found in the heart itself and looking at the thyroid as a possible source of the trouble this gland was discovered enlarged and the patient had tremors. On going over the history it was noticed that she had some enlargement of the thyroid early in life but this

had disappeared and it would seem that the infection of typhoid, acting on the thyroid, could account for the enlargement now present and the symptoms above described.

The second case is that of a child aged eight years, admitted on the eighth day of his infection, with typical signs of typhoid fever,—Widal reaction, temperature 104° . During the height of his fever the pulse never went above 112, ranging from 90-100. Defervescence came satisfactorily without complications on the thirty-fourth day of the disease. On the forty-fifth day the patient was allowed up in the chair and thereupon his pulse became so rapid that he was put back to bed and remained there until the eighty-second day of his disease. Throughout all this time the pulse rate ranged upwards of 100, sometimes 130, to 96. His thyroid was examined when he came in and marked negative; that is, it could not be felt. On the forty-fifth day of the disease it was well enlarged and tremors were particularly significant. I regard this case as explained most readily by the effect of the typhoid infection upon the circulation through the thyroid secretion.

One may say that hearts are frequently rapid after defervescence and especially so after typhoid or other protracted diseases. This applies when the heart has been subjected to stress after the fever. Tremors may also be found in these cases. It appears to us, however, that these two cases illustrate a condition that with a good deal of reason may be attributed to a change in the function of the thyroid due to infection. If we turn to the literature concerning thyroid involvement after acute infections, frequent reference is made to the effect which acute infections have in bringing about such conditions as herein described, but there are not many specific cases so far as I can discover.

DISCUSSION: Dr. W. S. Morrow: The one lesson I would draw from these cases is the point I have always insisted on, that no case of heart condition is complete without an examination of the thyroid gland, and also the back teeth should not be overlooked, as bad conditions here lead to indigestion and attendant ills.

Dr. A. E. Garrow: Did these patients recover perfectly after the prolonged stay in bed? Did the pulse rate come down to normal, the tremors disappear and the thyroid become normal?

Dr. W. F. Hamilton: The patients found the rest in bed a rather tedious process but both are in very good condition and have gained from the further rest, though the thyroid remained the same and the tremors remained the same. It was interesting

to note the weight curve in the child. After this complication of his recovery set in this patient did not increase as hitherto. The failure to maintain nutrition is another point favouring the view of the influence of the thyroid over the convalescence. The weight of most typhoid patients increases quickly after defervescence. The boy weighed fifty-six lbs., then fifty-eight and sixty, and then began to drop, though under the same conditions of rest in bed and feeding.

PAPER: Fibromatosis: Leather-bottle stomach, by Dr. G. E. Armstrong.

DISCUSSION: Dr. W. F. Hamilton: About fifteen years ago Dr. J. C. Cameron asked me to see a patient of forty-five or fifty, a merchant of this city, who complained that throughout the whole of his life he had never been able to take a full meal and his appearance made one feel that he was speaking the truth for he was very thin. He died with signs of gastric tumour. The tumour never enlarged from the time I saw him. I got the stomach and found it was a stomach very like the one shown to-night. I regarded it as a case of congenitally deformed stomach and I still am of that opinion. I would like to ask if there is not a possibility that this rather rare case of congenital stenosis might have gone on for fifty years or more and eventually caused death. I have always held the view that my case was one of those peculiar congenital stenoses that has gone on for years and years. I would like to ask if there is anything in the history of this case to prove whether it was acquired or congenital.

Dr. D. F. Gurd: When the paper was being read it suggested to me that one might get some information as to the rapidity of the emaciation where the gastric symptoms lasted a long while with very rapid emaciation, whether that would help to diagnose between malignancy and the benign condition. In ordinary carcinoma of the stomach the emaciation is extreme though it may last for two or three years. I would like to know whether it was extreme or not.

Dr. A. E. Garrow: Two years ago I recorded before this Society the only case of tuberculosis of the stomach which I had met with in private practice, and I was very much interested in the summary quoted by Dr. Armstrong where these cases after being subjected to examination were classed in the nature of granulomatoses. The particular case to which I refer of tuberculosis of the stomach I would have regarded as an early stage of this leather-bottle stomach. The conditions were much as Dr. Armstrong has

described, a smooth, hard, inelastic and thickened stomach wall. The point, however, which drew my attention first of all and made me suspicious was that the whole of the antrum was dotted over with miliary tubercles and in addition the glands in the pyloric region, particularly over the pylorus in the gastro-hepatic omentum, were very much enlarged. One of these was removed; it was caseous and Dr. Gruner declared it to be a tuberculous gland. A gastro-jejunostomy was performed and the patient had a good deal of hæmorrhage. He has remained well for two or three years and has been able to resume his occupation, enjoying good health. I regarded it as a case of tuberculosis of the stomach from a histological examination of one of the glands removed and from the distinct tubercles all over the antrum and particularly near the pylorus; they ceased as one went towards the cardia. The Wassermann was negative in my case.

Dr. G. E. Armstrong: Recent work has gone to establish that there is an entity that such a thing as benign fibromatosis does occur. The clinical history of many cases has enabled us to take a step further forward and say here there is a definite benign form; the relation of this, however, to the malignant is perhaps open to discussion. As to the question being congenital; in these cases there was no clinical history, no evidence for the belief that the gastric function was not right until coming to operation. In some of them the loss of weight is very noticeable, one lost thirty-four lbs. In the question of tuberculosis, that subject has been particularly taken up by Leo's school, advocating that these leather-bottle stomachs were really an evidence of mild attenuated form of tubercle. Later workers, however, simply say that they find no evidence of it and a good many pathologists reject the theory. As far as the luetic infection goes, in my cases the Wassermann was negative, and in some I had it taken twice. Phlegmonous gastritis must of course be very different. I have only seen one case personally, the man was brought into hospital in a moribund condition and died a few hours later; we found the typical condition. So far as I know all of my cases are well but one. That one was a case in which Dr. Gardner had removed a growth from the pelvis some years before, said to have been malignant; I saw her a year or two after I did the stomach operation and she had a large pelvic tumour which looked to me like a recurrence of the malignant condition for which Dr. Gardner operated. The gastric function, however, had remained good; she probably died subsequently from the malignant condition.